

HEARING
BEFORE THE
CALIFORNIA ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
)
Application for)
Certification for the) Docket No. 99-AFC-1
ELK HILLS POWER PROJECT)
)

)

CALIFORNIA ENERGY COMMISSION
FIRST FLOOR HEARING ROOM A
1516 NINTH STREET
SACRAMENTO, CALIFORNIA

TUESDAY, FEBRUARY 1, 2000

9:38 A. M.

Reported by:
Debi Baker
Contract No. 170-99-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

COMMITTEE MEMBER PRESENT

Michal Moore, Presiding Member

STAFF PRESENT

Major Williams, Jr., Hearing Officer

Kerry Willis, Staff Counsel

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Michael Ringer

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1 P R O C E E D I N G S

2 9:38 a.m.

3 PRESIDING MEMBER MOORE: Good morning.

4 This is the Elk Hills Power Project continuation
5 of the evidentiary hearings, today being Tuesday,
6 February 1, the year 2000.

7 I'm Michael Moore; I'm joined by Major
8 Williams here on my right. We are the Committee
9 that will be hearing this matter. And today we're
10 going to hear waste management and worker safety
11 and fire protection.

12 I have only really one housekeeping item
13 from my end and that is that I have to be party to
14 a conference call at 11:00, so we'll plan to take
15 a break then from about 11:00 to 11:15 so I can
16 accomplish that.

17 And beyond that let me turn to Major and
18 ask him if he's got any housekeeping items, and
19 then we'll begin.

20 HEARING OFFICER WILLIAMS: Good morning,
21 again. I'd like to apologize to the parties for
22 the delay this morning. There obviously was a
23 disconnect when Commissioner Moore announced from
24 the dias that we'd begin at 9:00 instead of 10:00.
25 And I won't get into the details.

1 PRESIDING MEMBER MOORE: Except that
2 he's blaming me for it.

3 (Laughter.)

4 PRESIDING MEMBER MOORE: Getting to get
5 pretty par for the course around here. I don't
6 know.

7 HEARING OFFICER WILLIAMS: I will say it
8 was not Commissioner Moore's fault.

9 I have distributed an exhibit list this
10 morning. Do any parties have a change to the
11 tentative exhibit list that I've passed out?

12 MS. LUCKHARDT: We don't have a change
13 at this time. I'd just like to note for the
14 record that we have provided copies of exhibit 21D
15 to everyone this morning. That was the errata to
16 public health testimony submitted by Steve Radus
17 orally on January 25th.

18 HEARING OFFICER WILLIAMS: Thank you,
19 counsel. I would note, also, that CURE has
20 distributed a new exhibit; it's the errata to Ms.
21 Fox's testimony on waste management and worker
22 safety. I have marked it as 21-I for
23 identification.

24 MS. LUCKHARDT: Just wonder if you have
25 some extra copies of that?

1 DR. FOX: No.

2 MS. LUCKHARDT: There was one over here.

3 I thought it was for the court reporter.

4 MS. REYNOLDS: No, it was for you.

5 MS. LUCKHARDT: Okay.

6 MS. REYNOLDS: I've given her a separate
7 copy.

8 MS. LUCKHARDT: Okay.

9 HEARING OFFICER WILLIAMS: I would also
10 state for the record that the identical parties
11 who were here when we last met are here again for
12 the proceedings. And there are no public
13 participants here.

14 MS. REYNOLDS: Mr. Williams, I have one
15 correction to make to the list.

16 HEARING OFFICER WILLIAMS: Okay, why
17 don't we do that.

18 MS. REYNOLDS: 27B, I think, was left
19 off. That's the same description as 27A, except
20 in parentheses it should say uncontrolled most
21 likely.

22 HEARING OFFICER WILLIAMS: Thank you,
23 counsel. Any others?

24 MS. REYNOLDS: Not from me. Actually,
25 yes, I'm sorry.

1 HEARING OFFICER WILLIAMS: Okay.

2 MS. REYNOLDS: I realize there's 27C and
3 27D, also. 27C was the same figure with Dr. Fox's
4 marking about the change to the ISO plat. And 27D
5 was the same figure with Joe Rowley's marking of
6 the existing ammonia tank.

7 HEARING OFFICER WILLIAMS: Okay, I've
8 noted those changes. And the list will be updated
9 at the next hearing on March 7th. Anything
10 further?

11 Well, I think at this point we're
12 prepared to begin with the applicant's
13 presentation on waste management. As Commissioner
14 Moore indicated, we've got two topics today.

15 MS. LUCKHARDT: Yeah, I believe we've
16 already presented the waste management panel and
17 this is the worker safety panel we have prepared
18 to go today.

19 HEARING OFFICER WILLIAMS: Okay.

20 MS. LUCKHARDT: Would you like me to
21 start with them?

22 HEARING OFFICER WILLIAMS: Yeah, why
23 don't you go ahead.

24 MS. LUCKHARDT: Okay, the three
25 witnesses the applicant calls for the worker

1 safety and site contamination issues are Mr. Joe
2 Rowley, Mr. Gary Cronk, who have previously been
3 sworn, and if I could get Roe Rowley to come up
4 and join us that would be great. And also Mr.
5 Roger Margotto, who needs to be sworn.

6 HEARING OFFICER WILLIAMS: Swear the
7 witness, please.

8 Whereupon,

9 JOSEPH ROWLEY and GARY CRONK
10 were called as witnesses herein and having been
11 previously duly sworn, were examined and testified
12 as follows:

13 Whereupon,

14 ROGER MARGOTTO
15 was called as a witness herein and after first
16 being duly sworn, was examined and testified as
17 follows:

18 MS. LUCKHARDT: I'll start with Mr.
19 Rowley.

20 DIRECT EXAMINATION

21 BY MS. LUCKHARDT:

22 Q Mr. Rowley has previously stated his
23 name, qualifications and experience for the
24 record, so at this point, Mr. Rowley, would you
25 please identify the exhibits which you are

1 sponsoring into evidence at this time?

2 HEARING OFFICER WILLIAMS: Counsel,
3 excuse me, before you get into the presentation,
4 could we swear the witness and get that done with.

5 MS. LUCKHARDT: Oh, have you not? I'm
6 sorry.

7 HEARING OFFICER WILLIAMS: And we'll
8 just please swear --

9 SPEAKER: She just did.

10 MS. LUCKHARDT: I thought we -- yeah.

11 HEARING OFFICER WILLIAMS: Oh, we did?
12 Oh, okay, I'm sorry, must have missed it.

13 MS. LUCKHARDT: It was while I was --

14 HEARING OFFICER WILLIAMS: Okay.

15 Thanks.

16 MS. LUCKHARDT: Okay, then I will ask
17 Mr. Rowley again to identify the exhibits he's
18 sponsoring today.

19 MR. ROWLEY: I'm sponsoring section
20 3.410, 412, 413, and 425 of the AFC, exhibit 1,
21 all having to do with various aspects of fire
22 protection.

23 MS. LUCKHARDT: And do you have any
24 corrections to make to your testimony today?

25 MR. ROWLEY: No.

1 MS. LUCKHARDT: And do you adopt the
2 portions of exhibit 1 identified earlier as your
3 true and sworn testimony on fire protection in
4 this proceeding?

5 MR. ROWLEY: Yes, I do.

6 MS. LUCKHARDT: Okay. Now, I will
7 switch to Mr. Cronk. Mr. Cronk has also
8 previously stated his name, title and
9 qualifications for the record.

10 DIRECT EXAMINATION

11 BY MS. LUCKHARDT:

12 Q So I'd like, at this time, Mr. Cronk, to
13 identify the exhibits he is sponsoring. Are
14 you --

15 MR. CRONK: No.

16 MS. LUCKHARDT: Okay, Mr. Cronk has
17 previously -- I'm sorry, Mr. Cronk has previously
18 provided his testimony on waste management, and
19 that was entered into the record on Thursday, and
20 he is available and will be available to respond
21 to some additional questions on site contamination
22 issues as it relates to worker safety and health
23 impacts.

24 So I'm going to turn to Mr. Margotto.

25 Mr. Margotto's qualifications have previously been

1 filed.

2 DIRECT EXAMINATION

3 BY MS. LUCKHARDT:

4 Q And, Mr. Margotto, would you please
5 state your name and your title for the record?

6 MARGOTTO: Yes, I'm Roger Margotto. I
7 am an Environmental Health and Safety Manager for
8 Foster Wheeler Environmental Corporation.

9 MS. LUCKHARDT: And would you please
10 identify the exhibits that you are sponsoring
11 today?

12 MR. MARGOTTO: Yes, I'm sponsoring AFC
13 section 5.14, worker safety, 5.18.3, cumulative
14 impacts, and section 6.42 and 6.514 worker safety,
15 laws, ordinances, regulations and standards.

16 MS. LUCKHARDT: And the AFC is exhibit 1
17 in this proceeding.

18 Do you have any corrections to make to
19 your exhibits today?

20 MR. MARGOTTO: No, I do not.

21 MS. LUCKHARDT: And are you also
22 sponsoring attachment A, testimony of Roger
23 Margotto, regarding worker safety in support of
24 the application for certification for the Elk
25 Hills Power Project?

1 MR. MARGOTTO: Yes, I am.

2 MS. LUCKHARDT: And do you have any
3 corrections to make to that today?

4 MR. MARGOTTO: No.

5 MS. LUCKHARDT: And do you adopt the
6 prefiled testimony as your true and sworn
7 testimony today?

8 MR. MARGOTTO: I do.

9 MS. LUCKHARDT: And, Mr. Margotto, would
10 you briefly summarize your testimony in the area
11 of worker safety?

12 MR. MARGOTTO: Well, my testimony on
13 worker safety is based upon my experience as well
14 as the laws and regulations of the State of
15 California for CalOSHA. And that's basically how
16 this was prepared.

17 MS. LUCKHARDT: Thank you. And can you
18 give us a rough estimate of how many worker health
19 and safety plans that you have written or reviewed
20 in your career?

21 MR. MARGOTTO: I would guess well over
22 300 of them.

23 MS. LUCKHARDT: And in your position do
24 your certifications that you have obtained and
25 that are previously provided in your rÇsum

1 require continuing education and training?

2 MR. MARGOTTO: Yes, they do. I'm
3 required to do annual continuing education.

4 MS. LUCKHARDT: And do you teach those
5 courses?

6 MR. MARGOTTO: I teach some courses,
7 yes.

8 MS. LUCKHARDT: And, Mr. Margotto, could
9 you please describe your field experience with oil
10 field wastes?

11 MR. MARGOTTO: I've worked on many
12 projects with oil field waste. I was a health and
13 safety manager to a chemical waste management
14 Kettleman Hills Facility, which accepted oil field
15 waste materials, as well as being originally a
16 site which oil muds were brought to.

17 And I've also recently worked on a
18 project which was comprised of a 15-acre site that
19 was nothing but oil field waste, muds and oil
20 field waste, in Huntington Beach.

21 MS. LUCKHARDT: And, as a health and
22 safety manager what is your primary concern?

23 MR. MARGOTTO: My primary concern is
24 protection of the worker.

25 MS. LUCKHARDT: And as you have reviewed

1 this case what type of site is it that the
2 proposed project is on, or proposed for?

3 MR. MARGOTTO: The site for this project
4 is an oil field. And basically with my experience
5 in this area I would characterize the site as any
6 other type of oil field site.

7 MS. LUCKHARDT: And how do you look at
8 worker safety at a site like this?

9 MR. MARGOTTO: I would basically
10 consider what type of site it was, what were the
11 past activities at that particular site, and then
12 evaluate how I would protect the workers on that
13 site through my experience, through knowledge of
14 the type of site that it was.

15 MS. LUCKHARDT: And do you do this
16 through the preparation of certain worker safety
17 and health management plans?

18 MR. MARGOTTO: Yes, I do.

19 MS. LUCKHARDT: And can you identify
20 those plans?

21 MR. MARGOTTO: I look at the scope of
22 work and the proposed work to be done, and
23 consider the type of procedures that are going to
24 be employed in conducting that work. And then
25 from there I evaluate what the potential hazards

1 are, the potential for exposure to contaminants.
2 And I would write a plan that basically addresses
3 those issues for protection of the workers.

4 MS. LUCKHARDT: And have you reviewed
5 Dr. Fox's testimony?

6 MR. MARGOTTO: Yes, I have.

7 MS. LUCKHARDT: And, in your opinion,
8 are there any legal requirements that address
9 workers at a construction site where contamination
10 may be encountered?

11 MR. MARGOTTO: Yes, there are numerous
12 regulations that actually address this.
13 California Code under CalOSHA basically says that
14 first of all that general industry safety orders
15 apply to all employees in the State of California
16 except where there are specific standards for a
17 type of employment; in this case the construction
18 safety orders.

19 And in the construction safety orders it
20 makes references to sites where there may be
21 contamination. And refers to other sections
22 within the regulations applying to construction
23 workers.

24 MS. LUCKHARDT: And do those regulations
25 set exposure levels?

1 MR. MARGOTTO: Yes, the CalOSHA does set
2 permissible exposure levels within Title 8.

3 MS. LUCKHARDT: And, Mr. Cronk, have you
4 also reviewed Dr. Fox's testimony in this case?

5 MR. CRONK: Yes, I have.

6 MS. LUCKHARDT: And in your opinion is
7 this an unusual site?

8 MR. CRONK: No, this is not an unusual
9 site. This is not a known hazardous waste site.
10 It's an oil field construction site. Routine type
11 of construction site. There are no oil wells or
12 no sumps on the plant site.

13 Nonetheless, even though we wouldn't be
14 expecting to encounter contamination we would take
15 normal safety precautions, normal health and
16 safety plan procedures would be enacted and the
17 workers would be trained and be equipped with
18 field instrumentation to detect any contamination
19 that would be encountered.

20 MS. LUCKHARDT: And, Mr. Margotto, would
21 your plans adequately address running into
22 contamination that was not previously identified?

23 MR. MARGOTTO: The plans would specify
24 what type of activities or actions that should be
25 taken in the event that unexpected materials are

1 encountered on the site.

2 MS. LUCKHARDT: And with the information
3 that you have available to you today regarding the
4 site, and assuming that you had a construction
5 plan, would you feel comfortable, as a health and
6 safety officer, going forward with developing the
7 required plans and starting construction?

8 MR. MARGOTTO: Yes, with the
9 construction plan in place, I would.

10 MS. LUCKHARDT: And why is it important
11 to have the construction plan?

12 MR. MARGOTTO: Primarily I need to know
13 the way in which the work is planned to be
14 executed so that I can anticipate the particular
15 hazards that workers may encounter. And in which
16 case then I can specify in the plan how to deal
17 with those.

18 MS. LUCKHARDT: And does that include
19 the specific equipment that is planned to be used
20 on site?

21 MR. MARGOTTO: Typically it does, yes.

22 MS. LUCKHARDT: And, Mr. Cronk, would
23 you recommend soil analyses along the linear
24 facilities prior to construction?

25 MR. CRONK: No, it wouldn't necessarily

1 be required. There are no oil wells within 50
2 feet of the linear alignments. That is a
3 requirement of the Department of Oil and Gas.

4 There's no known contamination along the
5 linears. Wells with known contamination with
6 chromium were all cleaned up; all but one of the
7 arsenic site well pads were cleaned up. And that
8 one particular site is not near a linear facility.

9 Again, the workers would be trained that
10 were doing the excavation along these linears.
11 And there are no regulations that would require
12 you to collect soil samples in advance.

13 MS. LUCKHARDT: And when you refer to
14 the requirement for 50 feet, were you referencing
15 that a linear facility needs to be at least 50
16 feet from that oil well?

17 MR. CRONK: That's correct.

18 MS. LUCKHARDT: And, Mr. Margotto, do
19 you agree with Mr. Cronk's statement?

20 MR. MARGOTTO: Yes, I do.

21 MS. LUCKHARDT: And, Mr. Margotto, what
22 are the appropriate worker exposure limits for
23 construction workers?

24 MR. MARGOTTO: As I stated earlier,
25 there are CalOSHA permissible exposure limits

1 which are specified in the regulations, and those
2 would be the levels that would be the ones that I
3 would look at as far as assessing or looking at
4 the potential worker exposure.

5 MS. LUCKHARDT: And do those include
6 action levels, as well?

7 MR. MARGOTTO: The permissible exposure
8 limit is the guideline, actually the legal
9 requirement. We have a requirement that basically
10 states that an action level is set at 50 percent
11 of the PEL, the permissible exposure limit. And
12 at that point we begin implementation of assessing
13 the workplace to make sure that we have met
14 procedures to protect the worker from getting to
15 that level of exposure.

16 MS. LUCKHARDT: And are there
17 permissible exposure limits for the types of
18 contaminants you expect could be found during
19 construction?

20 MR. MARGOTTO: Yes, there are.

21 MS. LUCKHARDT: And are the CalOSHA
22 regulations more stringent than the FedOSHA
23 regulations?

24 MR. MARGOTTO: The CalOSHA regulations,
25 first of all, have to be as stringent as the

1 FedOSHA regulations. And in many cases are more
2 strict than FedOSHA regulations.

3 MS. LUCKHARDT: And Dr. Fox in her
4 testimony refers to, I believe it's benzene in a
5 pounds/hour, or a pound figure. How do you relate
6 data reported in pounds/hour or pounds to worker
7 exposure?

8 MR. MARGOTTO: I really can't make a
9 correlation because of the fact that pounds/hour
10 is not a measure of unit volume, very difficult to
11 make that kind of calculation unless you know what
12 volume is involved in terms of mass per unit
13 volume such as in mg/cubic meter, or in terms of
14 ppm in the breathing zone of workers.

15 MS. LUCKHARDT: And for construction
16 workers, what is the primary route for exposure?

17 MR. MARGOTTO: As with all workers, the
18 primary route for exposure is inhalation.

19 MS. LUCKHARDT: And will there be a
20 place for construction workers to wash their hands
21 and clean their tools on site?

22 MR. MARGOTTO: The regulations actually
23 require that wherever contaminated soil is
24 present. So I would expect that there would be.

25 MS. LUCKHARDT: And, Mr. Cronk, CURE has

1 testified that the environmental professional
2 should be independent and report directly to the
3 CPM, not the applicant. Do you agree with that
4 statement?

5 MR. CRONK: No, I don't. There's
6 literally hundreds of site assessment remediation
7 projects that are conducted every week in
8 California without that type of requirement for a
9 third-party oversight.

10 The environmental professional, by
11 definition, is an unbiased independent party,
12 bound by their professional duty. I don't see any
13 compromise in professional standards.

14 MS. LUCKHARDT: And Dr. Fox has further
15 testified that most -- and I will use her word --
16 contamination in an oil field cannot be identified
17 through observation. Do you agree with that?

18 MR. CRONK: I would disagree with that
19 statement. In my experience I've worked on eight
20 to ten oil field remediation projects where crude
21 oil was a predominant contaminant.

22 Crude oil, by its nature, is very heavy
23 oil, very dark. It stains soil a very dark color,
24 easily very distinct from the native soils. So
25 you can tell pockets of contamination that are

1 contaminated with crude oil. As well as with the
2 odor. But the visual observation is obviously he
3 most obvious.

4 Now there are other contaminants
5 associated with crude oil and in an oil field.
6 There may be volatile organic compounds, there may
7 be polynucleararomatics, there may be heavy
8 metals. But again, in my experience, those are
9 normally associated with the crude oil.

10 They may be associated also with sumps,
11 where drilling muds may have been discharged to a
12 sump. But, again, you would have a mixture of
13 crude oil and some of these other contaminants.

14 And the drilling muds, themselves, are a
15 clay, a bentonite clay, which are usually distinct
16 from the native soils, you would be able to
17 distinguish them easily.

18 MS. LUCKHARDT: And what about natural
19 gas liquids?

20 MR. CRONK: It's my understanding there
21 may be some natural gas liquids, or there were
22 some natural gas liquids processed at this site.
23 And it's my understanding that natural gasoline,
24 which is a condensate product that may come from
25 the gaslines, may have been handled at this

1 particular site.

2 And if it was something similar to
3 gasoline, again, that would be very easily
4 detected, both by odor and by field
5 instrumentation.

6 MS. LUCKHARDT: And that field
7 instrumentation would be a --

8 MR. CRONK: A PID or an FID, a photo
9 ionization detector or a flame ionization
10 detector.

11 MS. LUCKHARDT: And Dr. Fox has further
12 testified that if soil contamination is discovered
13 during excavation or construction that the
14 construction activity should be immediately
15 suspended.

16 Do you agree with that statement?

17 MR. CRONK: No. Again, I've worked on
18 lots of projects and I've never seen the need to
19 necessarily stop a construction project in mid-
20 stream if contamination is detected.

21 Typically they would excavate known
22 contaminated soil, they would remove it to an area
23 outside of the construction zone. They would
24 cover it to keep emissions down. They would take
25 a sample of the soil, send it to a laboratory for

1 analysis, and then make a decision on what to do
2 with the contaminated soil at that point, whether
3 it be hauled off site or treated or whatever the
4 case may be.

5 MS. LUCKHARDT: And, Mr. Margotto, I
6 believe you were here on Thursday when Mr. Rowley
7 identified the location of an existing anhydrous
8 ammonia storage facility about a quarter mile from
9 the proposed project. Are you aware of that?

10 MR. MARGOTTO: I am, yes.

11 MS. LUCKHARDT: And would CalOSHA, not
12 asking for specific details on that, that project
13 or that site, but would CalOSHA and Prop 65
14 regulations require that those workers be
15 instructed on the actions to take upon a release
16 from the existing tank?

17 MR. MARGOTTO: Yes, I believe that they
18 would be trained on that. That would be required
19 under the regulations. I would expect those
20 workers would have that training and be made aware
21 of what the plans were, what they need to do in
22 event of evacuation, et cetera.

23 MS. LUCKHARDT: Thank you. I have no
24 further direct. And at this time I would like to
25 enter applicant's exhibits in the area of worker

1 safety into evidence.

2 HEARING OFFICER WILLIAMS: Any
3 objections? Seeing none, so admitted.

4 MS. LUCKHARDT: Okay, the witnesses, at
5 this time, are available for cross-examination.

6 HEARING OFFICER WILLIAMS: Thank you,
7 counsel.

8 MS. WILLIS: Staff does not have any
9 questions at this time.

10 MS. REYNOLDS: Yes, we have a few
11 questions.

12 HEARING OFFICER WILLIAMS: Please
13 proceed.

14 CROSS-EXAMINATION

15 BY MS. REYNOLDS:

16 Q Mr. Cronk, section 5.13 of the AFC which
17 you are sponsoring states that if low level
18 petroleum hydrocarbon impacted soil is encountered
19 but does not exceed regional water quality control
20 board soil cleanup levels it may remain on site.
21 That's on page 5.13-4.

22 What are the regional water quality
23 control board's soil cleanup levels?

24 MR. CRONK: They're determined on a
25 case-by-case basis. There are no set standards.

1 MS. REYNOLDS: Have standards been set
2 for this project?

3 MR. CRONK: No, they haven't.

4 MS. REYNOLDS: The AFC also states on
5 page 5.13-5 that if petroleum hydrocarbon impacted
6 soil is encountered but is classified as
7 nonhazardous it may be disposed of either off site
8 or remain on site contingent upon the quantity of
9 soil, concentrations of constituents present and
10 other potential factors.

11 First, can you tell us what quantity of
12 soil would be appropriate to remain on site?

13 MR. CRONK: Well, that would be approved
14 by a regulatory agency. Obviously if we detected
15 contamination we would need to notify Kern County
16 Environmental Health department, the water quality
17 control board, and my understanding now is also
18 DTSC, because there is a memorandum of
19 understanding with the DTSC.

20 So all those agencies would be notified.
21 They may not all get involved in the cleanup,
22 depending on the level of contamination, what type
23 contamination it is, and the extent of it.

24 MS. REYNOLDS: Would that be true if the
25 soil was classified nonhazardous, but still was

1 petroleum hydrocarbon impacted?

2 MR. CRONK: Yes.

3 MS. REYNOLDS: Could you tell us what
4 concentration levels of constituents would be used
5 as thresholds to determine whether it's
6 appropriate to allow the soil to remain on site?

7 MR. CRONK: Again, that would have to be
8 approved by a regulatory agency. An environmental
9 professional may submit a report making some
10 recommendations. But, again, that would have to
11 be approved by a regulatory agency if contaminated
12 soil is left on site.

13 MS. REYNOLDS: Can you identify the
14 other potential factors that would factor into the
15 decision about whether to keep the contaminated
16 soil on site or ship it off site?

17 MR. CRONK: It would depend upon if
18 there's a risk to say groundwater. If there's a
19 threat to groundwater quality. In this particular
20 case because the groundwater is so deep and
21 nonbeneficial use, there's really no threat to
22 groundwater quality.

23 If there's a threat to public health by
24 the contaminants then that would be determined
25 again by the levels of the contaminants, the type

1 of contaminants they are, whether they're just
2 petroleum hydrocarbons or whether they might be
3 polynucleararomatics or other volatiles or metals.

4 Each of those would have different types
5 of cleanup thresholds or they would be looked at
6 independently by a regulatory agency.

7 MS. REYNOLDS: In your testimony you
8 describe procedures that, based on your
9 experience, the environmental professional would
10 normally follow to detect soil contamination. And
11 you also stated on direct that an FID or a PID
12 would be used.

13 Do staff's proposed conditions of
14 certification require any of these instruments or
15 procedures?

16 MR. CRONK: Well, on waste-4 it does
17 specify that an environmental professional would
18 be on site during excavation --

19 MS. REYNOLDS: Actually could you tell
20 us where you --

21 MR. CRONK: I'm looking at the staff,
22 final staff assessment on page 85, waste-4
23 condition.

24 MS. REYNOLDS: Right.

25 MR. CRONK: Conditions of certification.

1 MS. REYNOLDS: Could you tell us
2 specifically where that requires the environmental
3 professional to be on site during soil excavation?

4 MR. CRONK: Well, the way I read it, it
5 does not specify that an environmental
6 professional needs to be on site. But in my
7 experience, because a health and safety plan would
8 be prepared for this site, the health and safety
9 plan would specify that there would be a health
10 and safety officer which may indeed be the same
11 person as the environmental professional that's
12 required by this condition.

13 And that person would be on site; that
14 person would screen soil; that person would have a
15 PID or an FID on site to screen soil.

16 MS. REYNOLDS: Are any of those things
17 that you just stated required as conditions of
18 certification by the --

19 MR. CRONK: No, but they're generally
20 required in a health and safety plan at this type
21 of site in my experience.

22 MS. REYNOLDS: Required --

23 MR. CRONK: They would be a typical
24 requirement in a health and safety plan.

25 MS. REYNOLDS: In your testimony you

1 list several mitigation measures, and that's in
2 attachment A, page 4. The first measure states
3 that excavation contractors hired to perform
4 demolition of equipment and initial grading of the
5 plant site will be OSHA trained in hazardous waste
6 operations.

7 I'm trying to get some clarification on
8 that. Would all construction workers engaged in
9 any soil disturbing activities receive HAZWOPER
10 training?

11 MR. CRONK: Not necessarily. In fact, I
12 would suspect that the environmental professional,
13 the health and safety officer at the site that's
14 very near the point of excavation, that's
15 screening the soil with the PID/FID, that person
16 would be health and safety trained, 40-hour
17 HAZWOPER training.

18 The other persons on site, depending on
19 the type of work they're doing and the type of
20 exposure they may encounter would receive less
21 training, or training dependent upon their level
22 of exposure.

23 MS. REYNOLDS: Can you visually detect
24 arsenic and chromium?

25 MR. CRONK: If it's in association with

1 crude oil, yes. Well, you wouldn't specifically,
2 but typically if they're in an oil field, you
3 know, you suspect those type of contaminants
4 typically associated with a crude oil
5 contamination.

6 MS. REYNOLDS: Is it always?

7 MR. CRONK: I wouldn't say that it's
8 always associated with it, but from my experience
9 it commonly is.

10 MS. REYNOLDS: Mr. Cronk, have any of
11 the plants that you've been referring to that
12 would be prepared to address worker safety and
13 contamination issues, have any of those been
14 prepared yet?

15 MR. CRONK: Are you talking about health
16 and safety plan? Are you talking about -- no,
17 none of those have been prepared yet.

18 MS. REYNOLDS: Mr. Margotto, you state
19 in your testimony that because construction
20 workers could come into contact with contaminated
21 soil they would receive appropriate OSHA hazardous
22 material safety training. That's in attachment A,
23 pages 3 and 4.

24 Could you explain what appropriate
25 training means for this project?

1 MR. MARGOTTO: Well, it depends upon
2 what the workers may or may not be exposed to.
3 The issue is that in most projects of this type we
4 have persons in place who would assess the job
5 site, as we talked about, the environmental health
6 professional who would be at the site.

7 And when that condition is noted, then
8 at that point there is a change to the work that
9 progresses to the extent that if the soil has to
10 be disturbed, or workers have to come in contact
11 then with that soil, then only those workers that
12 have had that specific type of training would be
13 working with that material.

14 But to that point there is not a
15 requirement that workers in general construction
16 have that specific training.

17 MS. REYNOLDS: As far as contamination
18 that is discovered during construction, how would
19 that work?

20 MR. MARGOTTO: Well once the
21 contamination has been noted, then the requirement
22 would be that those workers that work with that
23 contamination that would have to physically remove
24 it or work in the proximity of that contamination
25 would then have to be at least capable of having

1 either the proper protective gear, or the
2 knowledge, at least, to be able to work with that
3 material.

4 And they should have that training in
5 order to do that particular work.

6 MS. REYNOLDS: Will the hazards
7 analysis -- you state in your testimony that the
8 hazards analysis, which is included in the
9 construction -- which will be included in the
10 construction IIPP will specifically address
11 hazards posed by the handling of soils
12 contaminated with bihydrocarbons. That's in
13 attachment A,
14 page 3.

15 Will the hazards analysis specifically
16 address hazards posed by soils contaminated with
17 metals such as arsenic and chromium?

18 MR. MARGOTTO: I believe that it would.
19 There are requirements that we would have to
20 address in that issue.

21 MS. REYNOLDS: And the requirements?

22 MR. MARGOTTO: Again, the regulations.
23 If there's any potential for exposure to the
24 contaminants, then obviously we would have to
25 address those issues within the plan.

1 MS. REYNOLDS: Have any of these worker
2 safety plans been prepared yet?

3 MR. MARGOTTO: No, they have not.

4 MS. REYNOLDS: Will these plans be
5 prepared before the Energy Commission certifies
6 the project?

7 MR. MARGOTTO: No.

8 MS. REYNOLDS: How long does it usually
9 take to develop these types of worker safety
10 plans?

11 MR. MARGOTTO: Depends upon the extent
12 of the proposed project. But typically these
13 plans normally take anywhere between 20 to 40
14 hours to prepare.

15 MS. REYNOLDS: Those are all the
16 questions I have.

17 MS. LUCKHARDT: I just have a couple on
18 redirect.

19 REDIRECT EXAMINATION

20 BY MS. LUCKHARDT:

21 Q First, Mr. Cronk, you were asked whether
22 you could visually detect arsenic and chromium.
23 How would you visually detect arsenic and chromium
24 at the site?

25 MR. CRONK: I wouldn't visually detect

1 it, but basically if there was crude
2 contamination, if there was visual evidence that
3 there was crude oil contamination the routine
4 sampling that we would take of that contaminated
5 soil might be screened for a sample taken and
6 analyzed for arsenic and chromium, in particular,
7 to see if those contaminants were in association
8 with the crude oil.

9 MS. LUCKHARDT: And are arsenic and
10 chromium items that you would typically find in
11 drilling muds?

12 MR. CRONK: They might be. Those were
13 added to drilling fluids during construction of
14 the well and they may be in association with the
15 drilling muds.

16 MS. LUCKHARDT: And how do you identify
17 drilling muds?

18 MR. CRONK: Again, the drilling muds
19 were more typically bentonite clay and the clay
20 material that would be left in a sump would be
21 much different in texture and composition than the
22 native soils which are sands and silt and gravels.

23 MS. LUCKHARDT: And for this particular
24 site would you expect any arsenic or chromium to
25 be associated with drilling muds?

1 MR. CRONK: Could you repeat that
2 question again?

3 MS. LUCKHARDT: At this particular site
4 if arsenic or chromium were there would you expect
5 them to be associated with drilling muds?

6 MR. CRONK: That would probably be the
7 most likely place they would be found.

8 MS. LUCKHARDT: And, Mr. Margotto, you
9 were asked about the preparation of the different
10 plans. Have you included detailed outlines of
11 those plans in the AFC?

12 MR. MARGOTTO: I've included outlines in
13 the AFC, yes.

14 MS. LUCKHARDT: And in order to prepare
15 those plans earlier you stated you needed a
16 construction plan. Could you describe the level
17 of detailed information that's provided in the
18 construction plan?

19 MR. MARGOTTO: Well, the construction
20 plan describes the type of equipment, procedures
21 and processes that are going to be done on a
22 construction site. Basically the plan for
23 implementation of the actual project work.

24 In reviewing those plans, as a health
25 and safety professional, I would look at those and

1 determine issues relevant to the disturbance of
2 the soil, issues relevant to the way in which it's
3 excavated.

4 I have concerns that obviously include
5 all aspects of the project and the construction.

6 MS. LUCKHARDT: And so would it be
7 possible to prepare your health and safety plans
8 prior to receiving a detailed construction plan?

9 MR. MARGOTTO: It would be almost
10 impossible because of the fact that I wouldn't
11 have enough detail prior to knowing what the
12 construction process is going to be in preparing
13 that plan.

14 MS. LUCKHARDT: And, Mr Rowley, could
15 you prepare a construction plan without final
16 design?

17 MR. ROWLEY: The construction plan is
18 best prepared by the party that is actually going
19 to be conducting the construction. And that is
20 the same party that would be doing the design of
21 the project, in other words, it would be the
22 engineering, procurement and construction
23 contractor.

24 The retaining of that contractor is
25 still sometime in the future. And once that

1 contractor is retained, then of course he would be
2 responsible for having the, for example, health
3 and safety officer on site and fulfilling the
4 requirements of the regulations.

5 And he would be able to factor in the
6 design that he is performing in conjunction with
7 the construction plan.

8 MS. LUCKHARDT: I have nothing further.

9 HEARING OFFICER WILLIAMS: Anything
10 further?

11 MS. REYNOLDS: Just a few.

12 RECROSS-EXAMINATION

13 BY MS. REYNOLDS:

14 Q Mr. Margotto, the AFC contains a list of
15 construction equipment in the air appendix, like a
16 number of bulldozers, et cetera. And it also --

17 MS. LUCKHARDT: I don't believe Mr.
18 Margotto has reviewed the air quality section of
19 the AFC.

20 MS. REYNOLDS: That's my question.

21 BY MS. REYNOLDS:

22 Q My question is have you seen the list of
23 construction equipment that the applicant has
24 stated would be used?

25 MR. MARGOTTO: No, I have not seen that

1 portion.

2 MS. REYNOLDS: Is that the type of
3 information you would need to prepare these plans?

4 MR. MARGOTTO: It would be a start. It
5 would tell me the type of equipment, but it still
6 doesn't necessarily tell me how it's used.

7 MS. REYNOLDS: Okay. Mr. Rowley, you
8 said that the construction plan is best prepared
9 by the contractor, and you have not retained a
10 contractor.

11 Is it possible for the applicant to give
12 Mr. Margotto the information he needs about the
13 type of construction activities that would be
14 necessary to construct this project?

15 MR. ROWLEY: We could speculate as to
16 what the specific construction activities would
17 be. But that would all be subject to change based
18 on what the actual EPC contractor decided was the
19 best way to approach the project.

20 So, we could speculate and develop
21 plans, but in the end it would be the EPC
22 contractor that would be in the best position to
23 finalize that.

24 MS. REYNOLDS: Through work that you
25 have done with this project before the Energy

1 Commission, have you identified areas of soil that
2 are most likely to be disturbed by project
3 construction?

4 MR. ROWLEY: Yes.

5 MS. REYNOLDS: I have no further
6 questions.

7 HEARING OFFICER WILLIAMS: Anything
8 further, counsel?

9 MS. LUCKHARDT: I'm thinking.

10 (Pause.)

11 MS. LUCKHARDT: I have one further
12 question.

13 FURTHER REDIRECT EXAMINATION

14 BY MS. LUCKHARDT:

15 Q You just responded, Mr. Rowley, to a
16 question as far as knowing which areas might be
17 disturbed. If you were to conduct a phase two,
18 would you test every single square inch of that
19 area?

20 Maybe I should refer that to one of the
21 other experts, Mr. Cronk or Mr. Margotto? When
22 you do a phase two, do you test every square inch?

23 MR. CRONK: No. You typically would
24 only collect soil samples at areas that are
25 suspect or areas that you might suspect that

1 contamination may have occurred, may have leaked
2 or otherwise been released.

3 MS. LUCKHARDT: Could you miss something
4 in a phase two?

5 MR. CRONK: Oh, yes.

6 MS. LUCKHARDT: Thank you.

7 HEARING OFFICER WILLIAMS: Anything
8 further?

9 MS. REYNOLDS: No.

10 HEARING OFFICER WILLIAMS: Okay. We'll
11 proceed now to staff.

12 MS. WILLIS: Staff calls Mike Ringer and
13 Rick Tyler. Mr. Tyler will be sponsoring the
14 worker safety and fire protection, and Mr. Ringer
15 was the author of the waste management.

16 So, we'll start with Mr. Ringer, and
17 then we'll move to Mr. Tyler.

18 PRESIDING MEMBER MOORE: Has Mr. Ringer
19 been previously sworn?

20 MS. WILLIS: No, he has not.

21 PRESIDING MEMBER MOORE: Okay, would you
22 swear the witness, please.

23 Whereupon,

24 MICHAEL RINGER

25 was called as a witness herein, and after first

1 having been duly sworn, was examined and testified
2 as follows:

3 HEARING OFFICER WILLIAMS: Proceed.

4 DIRECT EXAMINATION

5 BY MS. WILLIS:

6 Q Mr. Ringer, did you prepare the section
7 of the final staff assessment entitled waste
8 management?

9 A Yes, I did.

10 Q And that is part of the FSA that has
11 been previously identified as exhibit 19. Did you
12 include in exhibit 19 a statement of your
13 qualifications?

14 A Yes.

15 Q Do you have any changes or corrections
16 to your testimony today?

17 A No, I don't.

18 Q And do the opinions in your testimony
19 represent your best professional judgment?

20 A Yes, they do.

21 MS. WILLIS: Mr. Tyler has been
22 previously sworn in and has given a statement of
23 his qualifications.

24 //

25 //

1 Whereupon,

2 RICK TYLER

3 was recalled as a witness herein, and having been
4 previously duly sworn, was examined and testified
5 further as follows:

6 DIRECT EXAMINATION

7 BY MS. WILLIS:

8 Q Mr. Tyler, are you sponsoring the worker
9 safety and fire protection section of the final
10 staff assessment?

11 A Yes, I am.

12 Q Do you have any changes or corrections
13 to your testimony today?

14 A No, I don't.

15 Q Do the opinions contained in this
16 testimony represent your best professional
17 judgment?

18 A Yes, they do.

19 MS. WILLIS: Mr. Ringer, could you
20 please provide a brief summary of your waste
21 management testimony?

22 MR. RINGER: Yes. My main objectives in
23 the waste management section were to make sure
24 that the management of all waste from the project
25 would be in compliance with all laws, ordinances,

1 regulations and standards.

2 This is especially important in the area
3 of waste management, since hazardous wastes and
4 solid wastes are pretty highly regulated. So,
5 insuring compliance with all the applicable
6 regulations and laws would insure that waste
7 generated during the operation and construction of
8 the proposed facility would be environmentally
9 sound.

10 My second main objective was to make
11 sure that the disposal of project wastes would not
12 result in any significant adverse impacts to
13 existing waste disposal facilities.

14 The applicant provided a phase one
15 environmental site assessment which I reviewed,
16 and based on the results of that I concluded that
17 that there was a low probability of significant
18 contamination at the site.

19 So it's unlikely that there would be
20 significant amounts of hazardous waste generated
21 due to project construction from site preparation
22 activities from contaminated soils.

23 As far as the actual nonhazardous and
24 hazardous wastes that could be generated during
25 construction and operation, this facility would

1 generate normal construction wastes, both
2 hazardous and nonhazardous.

3 Nonhazardous including things like
4 excess lumber and concrete and scrap metal, et
5 cetera.

6 Hazardous wastes including waste oil and
7 grease, paint, spent solvent and things like that
8 that are common from these types of construction
9 facilities.

10 I looked at operational wastes, again
11 both nonhazardous and hazardous. Nonhazardous
12 wastes include things like trash, office waste,
13 empty containers, broken parts, et cetera.

14 Hazardous wastes include spent air
15 pollution control catalysts, used oil, cleaning
16 solvents, waste paint and the like.

17 I looked at the quantities set that are
18 expected to be generated of these types of
19 materials. I looked at the proposed waste
20 disposal facilities that could be used, both
21 nonhazardous and hazardous.

22 And I concluded that the waste from the
23 facility would not meaningfully impact any of the
24 landfills capacities or operating lifetimes.

25 So, in conclusion, looking at all of the

1 different factors, I concluded that management of
2 wastes generated both during construction and
3 operation would not result in any significant
4 adverse impacts.

5 And included in that would be the
6 conditions of certification in compliance with all
7 the applicable regulations and laws.

8 MS. WILLIS: Mr. Ringer, did you review
9 CURE's testimony presented by Dr. Fox?

10 MR. RINGER: Yes, I did.

11 MS. WILLIS: And do you have any
12 comments on that testimony?

13 MR. RINGER: Yes, I have some comments
14 on that. Referring to Dr. Fox's testimony on
15 pages 1 through 3, approximately, Dr. Fox alleges
16 that due to contamination at the project site,
17 waste management impacts would be significant.

18 However, Dr. Fox doesn't present any
19 specific credible evidence that the proposed site
20 is contaminated. She only speculates that it
21 could be, citing an overview of historic oil field
22 practices at other portions of the oil field which
23 relate to wells or waste facilities such as ponds,
24 sumps, pits, landfills and the like.

25 She ignores the fact that there is no

1 evidence that the site has ever been used for any
2 purpose other than gas storage. There is no
3 record of well drilling on the property. And
4 there are no active or abandoned oil production
5 wells, oil storage or processing facilities, or
6 oil sumps on the site.

7 On page 5 Dr. Fox tries to narrow it
8 down a little bit. She tries to show the
9 likelihood of contamination at the project site by
10 citing the Department of Toxic Substances Control
11 RCRA facility assessment, which is included in her
12 testimony as exhibit D.

13 This document identified 147 solid waste
14 management units and areas of concern. Thirteen
15 of these require additional investigation for
16 contamination, and are located in section 35R
17 where the power plant would be located.

18 As part of her exhibit D she includes
19 several pages for the facility assessment showing
20 the different areas where further investigation is
21 required.

22 However, with respect to the facility
23 assessment and potential site contamination, it
24 would be more instructive to note the letter from
25 the Department of Toxic Substances Control to

1 Marc Pryor, which is dated April 8, 1999, and
2 docketed on April 12, 1999, which states that DTSC
3 has reviewed the application --

4 HEARING OFFICER WILLIAMS: Excuse me,
5 are you reading from a document now, Mr. Ringer?

6 MR. RINGER: This is -- I'm not reading
7 from the document, but I'm referring to a letter
8 from the Department of Toxic Substances Control
9 which was docketed in this docket file on April
10 12th.

11 HEARING OFFICER WILLIAMS: Has that been
12 admitted into evidence?

13 MS. WILLIS: No, it has not.

14 HEARING OFFICER WILLIAMS: Why don't we
15 mark it and give the other parties an opportunity.
16 Do you have copies, Mr. Ringer?

17 MR. RINGER: I have one copy.

18 HEARING OFFICER WILLIAMS: Can we get
19 copies of that?

20 MR. RINGER: In that letter DTSC stated,
21 "Based on our review we have determined that the
22 proposed project is not within the areas of
23 concern identified by DTSC report titled 'Naval
24 Petroleum Reserve No. 1, Elk Hills, California,
25 RCRA Facility Assessment'" and, quote, "Therefore,

1 DTSC has no comments on the proposed project."

2 On page 6 Dr. Fox discusses
3 contamination near a proposed linear construction.
4 It should be noted that the water supply pipe will
5 be located in an existing corridor. The
6 wastewater pipeline will be located along the
7 existing Elk Hills Road corridor. The natural gas
8 pipeline will be located entirely above-ground
9 within an existing pipeway.

10 The transmission line route 1B follows
11 an existing transmission line corridor and a
12 roadway corridor. And transmission line route 1A
13 is not near any identified well pads or sumps.

14 Specifically on page 6, Dr. Fox states,
15 of her testimony, the project linears are also
16 located near sites of known contamination,
17 referring to contaminated well pads. But then
18 qualifies that by saying, although some of these
19 were apparently remediated.

20 She includes exhibit E of her testimony
21 which shows the proposed linear facilities in
22 relation to the chromium-contaminated sites. The
23 exhibit E in her testimony is from the Department
24 of Energy's 1993 supplement to the 1979 final
25 environmental impact statement for petroleum

1 production at Elk Hills. And figure 3.2-1 of that
2 document does show 65 chromium spill sites which
3 she identified on her map.

4 Discussing the apparent remediation of
5 some sites, it would probably be more accurate to
6 quote page 3.2-8 of the EIS which states, the
7 chromium cleanup level was negotiated with DTSC,
8 and that all 65 sites have now been remediated.
9 Verification testing to insure complete
10 remediation of these sites has been completed.

11 It is interesting to note, though, even
12 if residual chromium were to remain, the
13 environmental impact statement on page 3.2-7
14 explains that due to acidic conditions and
15 reactions with native clay soils, virtually all of
16 the chrom6, that's hexavalent chromium, which is
17 the hazardous form, would be expected to be
18 reduced to chrom3, which is the less hazardous
19 form.

20 And the EIS states, tests of the spent
21 drilling fluids show that virtually no hexavalent
22 chromium remains.

23 Also, the EIS points out, on page 3.2-7
24 and 8 that chromates and dichromates are soluble
25 in water and can be transported by capillary

1 action to the surface where they can appear as a
2 powdery yellow to yellow-green deposit that can
3 best be seen after a rain.

4 In fact, the Department of Energy
5 utilizes this phenomenon and has a visual
6 inspection program to spot potential sites, which
7 they refer to on page 3.2-14 of the EIS.

8 On page 6, Dr. Fox states that a phase
9 one environmental site assessment would only
10 detect hazards that are obvious to a casual
11 observer. And I think this is a purposeful
12 mischaracterization of what a phase one
13 environmental site assessment is.

14 It ignores the fact that it was
15 conducted by a registered professional engineer in
16 accordance with methods and procedures set forth
17 by the American Society for Testing Materials,
18 which was described in the phase one, itself, and
19 in previous testimony given by Harry Tau.

20 On page 9 of her testimony it's stated
21 that the phase one presumes that buried pipelines
22 are present on the project site and can endanger
23 workers. Actually the phase one for Elk Hills
24 contains no statement whatsoever concerning buried
25 pipelines at the site.

1 Although such a statement may be found
2 in the phase one ESA for the Sunrise Project, it's
3 not relevant in this case.

4 Page 10, Dr. Fox alleges that proposed
5 condition of certification waste-4 is inadequate
6 because it requires that construction workers
7 notify the environmental professional when
8 contaminated soil is encountered, and construction
9 workers and managers are not trained to identify
10 contaminated soil.

11 However, she then provides exhibit F to
12 her testimony, the environmental oversight program
13 for the federal courthouse in Sacramento, as an
14 example of mitigation measures taken during
15 construction on contaminated sites.

16 On page 5-3 of that document, in the
17 section entitled, apparent contamination, it
18 states that although a given parcel will have been
19 remediated, it is possible that residual levels of
20 chemicals may be present where they could be
21 encountered during construction, a similar case in
22 this site.

23 It then sets forth the following
24 procedures to be followed: Number one, the
25 environmental oversight authority notification.

1 The constructor shall promptly notify the EOA, the
2 environmental oversight authority, upon the
3 suspected discovery of impaired contamination.

4 Thus, this procedure is almost identical
5 to our proposed condition of certification waste-4
6 in regarding the notification of contamination
7 during construction to an environmental
8 professional.

9 And that's all the comments I have on
10 her testimony.

11 MS. WILLIS: Thank you. Mr. Tyler,
12 could you please --

13 HEARING OFFICER WILLIAMS: Counsel,
14 before you begin with Mr. Tyler, I've identified
15 the exhibit that Mr. Ringer testified from as
16 exhibit number 33. It's a letter from Mr. Wade
17 Cornwell to Marc Pryor from the Department of
18 Toxic Substances Control.

19 Do you wish to offer this document into
20 evidence?

21 MS. WILLIS: We can.

22 HEARING OFFICER WILLIAMS: Is there any
23 objection to the document?

24 MS. LUCKHARDT: No.

25 HEARING OFFICER WILLIAMS: Okay, it will

1 be admitted as exhibit number 33.

2 MS. WILLIS: Mr. Tyler, could you please
3 provide a brief summary of your worker safety and
4 fire protection testimony?

5 MR. TYLER: Yes. With regard to worker
6 protection staff generally relies on the extensive
7 existing regulatory program administered by
8 CalOSHA to insure the protection of workers.

9 These program requirements are
10 identified in the worker safety testimony. I
11 won't go over those specifically.

12 In the absence of any extraordinary
13 conditions associated with a specific facility
14 that would suggest that these programs are not
15 sufficient to protect public health, we would rely
16 on these programs to insure worker protection, and
17 we believe that they're effective in doing so.

18 There has been some discussion about
19 whether there plans are in place prior to
20 certification of the project by the Commission.
21 For many reasons it's difficult or maybe even
22 impossible to do an adequate job of preparing such
23 plans at this stage in project development.

24 What I would say is that these plans
25 will be reviewed and approved prior to any

1 construction at the site. So the net effect is
2 that workers would be protected, and that the
3 plans would be in place before there was ever any
4 potential for exposure.

5 Further, I would state that I have no
6 reason whatsoever to believe that it's infeasible
7 to develop and implement appropriate plans prior
8 to that construction taking place.

9 MS. WILLIS: Mr. Tyler, before you go
10 on, could you address where in the conditions of
11 certification?

12 MR. TYLER: Yes. There's two conditions
13 of certification, I believe they're safety
14 conditions 1 and 2. First, safety condition 1
15 requires the owner to develop a construction
16 safety management plan or safety and health
17 program.

18 And condition 2 requires the owner to
19 develop an operational safety health program to
20 protect workers.

21 And those both must be in place prior to
22 construction.

23 With that I'd like to go on and address
24 a specific comment on page 31, the first page of
25 the worker safety testimony. And that is in the

1 second paragraph we discuss that at the time this
2 was prepared we did not know whether there would
3 be discussion of contaminated soil to any
4 significant extent in the public health testimony.

5 As a result of the phase one study and
6 the lack of concern or lack of belief that there's
7 any contamination at the site, this was not
8 further addressed in the public health testimony,
9 as stated on that.

10 So there is no analysis in the public
11 health section, to the best of my knowledge,
12 addressing that.

13 From that I'd like to more on to CURE's
14 testimony, which I've reviewed.

15 MS. WILLIS: Can I ask you one question
16 before you move ahead. When you were analyzing
17 this case how did you determine which person was a
18 member of the public versus who was a worker?

19 MR. TYLER: In this case I believe that
20 all of the workers on the Elk Hills oil field,
21 both OXY workers and this facility's workers,
22 would be viewed as workers in the context.

23 This is a piece of private property with
24 an additional facility that is in the center of
25 the existing industrial complex. The types of

1 exposures are similar between the two facilities,
2 and in fact, there's already existing exposure to
3 anhydrous ammonia, as we discussed earlier at the
4 OXY facility.

5 It's my belief that for many reasons
6 that we would apply worker standards to those
7 individuals. In doing so I would like you to take
8 note of the fact that there's generally a very
9 different standard of protection that's applied to
10 workers versus the public. This is a major
11 difference between CURE's point of view and our
12 point of view.

13 The standards of protection that apply
14 to the public are many times, as much as three
15 orders of magnitude, lower, in other words, more
16 health protective, than those that would typically
17 be applied to workers. Because the standards for
18 public protection require that all individuals in
19 the public be protected with an adequate margin of
20 safety.

21 Generally this goes to the fact that the
22 general public includes infants, it includes
23 people who are very seriously chronic -- have very
24 serious chronic illnesses. Those people are
25 generally much more susceptible to exposure to

1 contamination than the less sensitive segments of
2 the general population.

3 In general, the workplace is composed of
4 what I would characterize as health adults. And
5 that's among the least sensitive segment of the
6 general population.

7 There's also major differences in the
8 exposure regimen. Generally, when you evaluate an
9 exposure of the general public, you evaluate that
10 exposure based on continuous exposure, 24 hours a
11 day over the life of the individual for 70 years.

12 In the case of the workplace obviously
13 we have 40-hour work week, 52 weeks a year, that
14 makes a considerable difference in the duration of
15 exposure, which is directly proportional to the
16 potential for effects.

17 MS. WILLIS: Mr. Tyler, do you believe
18 the proposed conditions of certification
19 adequately protect workers in this case?

20 MR. TYLER: Yes, I do.

21 There's another major point that I would
22 like to make with regard to workers versus the
23 public, and that is the fact that the Elk Hills
24 oil field and this facility are both on private
25 property.

1 It's my experience, working for ARB and
2 over my whole regulatory career, that generally
3 when you talk about public you talk about people
4 outside the boundaries of private property.

5 Clearly Occidental is aware, this is a
6 host facility, there's economic benefit to the
7 workers at Occidental to Occidental. They've
8 agreed to have this facility in the center of
9 their industrial facility.

10 And, in general, what I believe you
11 would find is the 2588 program would look at
12 exposures beyond the fenceline. So, there's this
13 clear demarcation between what is public and what
14 is workers.

15 This is a piece of private property
16 where workers are present. And additionally, I'd
17 point out that those workers must be informed of
18 the risks that exist in their workplace, and thus
19 consent and receive benefit in terms of
20 employment.

21 And further, that it's much easier to
22 control their exposures in the event of an
23 emergency than it would be the general public.
24 And we can use protective equipment to protect
25 them which wouldn't be appropriate for the public.

1 So there's major differences, and we
2 believe that Occidental's workers are clearly
3 workers in the context of the existing
4 regulations.

5 From that I'd like to go on and address
6 specifically some of the issues that were raised
7 with regard to both ammonia risks and the risks
8 associated with site contamination, which CURE has
9 raised.

10 MS. REYNOLDS: I'm sorry, could you -- I
11 thought we covered hazardous materials issues
12 earlier. Are we revisiting hazardous materials,
13 or to what extent are you covering hazardous
14 materials issues here?

15 MR. TYLER: Well, I think that they're
16 related, in that you've argued that workers were
17 potentially exposed to unacceptable -- that you
18 argued that we should treat Occidental's workers
19 as members of the public.

20 MS. REYNOLDS: I'm just curious as to
21 where we're going here?

22 MR. TYLER: And we didn't address the
23 issues that affect workers at that site.

24 MS. REYNOLDS: Well, during your
25 testimony on hazardous materials you did make

1 several statements about workers being protected
2 by OSHA standards for hazardous materials.

3 So I just don't understand why we're
4 going over this again.

5 MR. TYLER: Okay, then I can just move
6 on and address, if everyone's happy with the
7 discussion there, I can move on and address the
8 risks associated with site contamination.

9 HEARING OFFICER WILLIAMS: Why don't you
10 do that.

11 MR. TYLER: Okay. First off I would
12 state that I believe that the workers at the site
13 are adequately protected by the existing
14 regulations, as I've stated. That there are
15 specific industrial safety orders that apply to
16 any worker that would work to clean up a
17 contaminated site.

18 There are the general safety orders that
19 are discussed in our testimony. And I believe
20 that in the context of this facility that there's
21 no reason for me to believe at this time that
22 there's any significant contamination at the site.
23 Therefore, it's my opinion that this is just like
24 any other industrial construction. And that there
25 are no extraordinary conditions that would make me

1 question the adequacy of these programs.

2 One final cleanup issue that I'd like to
3 address is CURE has raised some questions about
4 the location. The applicant has agreed to
5 purchase or help purchase particular fire
6 protection equipment in the terms of a ladder
7 truck for the Kern County Fire Department.

8 I don't think there's any question about
9 that being appropriate. What the question is, is
10 the location of that truck. And discussions with
11 the Fire Department suggest to us that they
12 believe that the personnel at the station that
13 they've proposed, its location, are best able to
14 operate that vehicle effectively, and that that's
15 the best place for storage of that vehicle.

16 And that they believe that they can
17 adequately respond to any condition at the site
18 from that facility within a reasonable time.

19 MS. WILLIS: Does that conclude your
20 testimony?

21 MR. TYLER: Yes, it does.

22 MS. WILLIS: Okay, at this time staff
23 would like to move the waste management and worker
24 safety and fire protection sections of the FSA
25 into the record.

1 HEARING OFFICER WILLIAMS: Any
2 objection?

3 MS. LUCKHARDT: No objection.

4 HEARING OFFICER WILLIAMS: So admitted.

5 MS. WILLIS: And I guess exhibit 33 we'd
6 also want to move that into the record.

7 HEARING OFFICER WILLIAMS: Exhibit 33
8 has been admitted.

9 MS. WILLIS: These witnesses are now
10 available for cross-examination.

11 HEARING OFFICER WILLIAMS: Cross.

12 CROSS-EXAMINATION

13 BY MS. LUCKHARDT:

14 Q Mr. Tyler, I guess I'd just like to
15 clarify one thing. On your comment about, I guess
16 it's page 31 of the FSA, regarding the discussion
17 in the public health section. I'm not sure if I
18 heard correctly.

19 Do you feel that there is any need to
20 have a discussion in the public health section?

21 MR. TYLER: No, I do not. I do not
22 believe that there's any evidence to suggest that
23 there's significant contamination at this site.
24 The phase one study has already demonstrated that
25 to my satisfaction.

1 In the absence of any evidence of site
2 contamination or any quantification of the extent
3 of that contamination or of soil levels, there's
4 no basis to even do an analysis.

5 So, my view is that there's no necessity
6 for any kind of health risk assessment to be
7 conducted in that context.

8 MS. LUCKHARDT: Thank you, I have
9 nothing further.

10 HEARING OFFICER WILLIAMS: CURE?

11 MS. REYNOLDS: Yes.

12 CROSS-EXAMINATION

13 BY MS. REYNOLDS:

14 Q Mr. Ringer, I have a couple questions
15 about waste-4, condition waste-4. Does this
16 condition require the environmental professional
17 to be on site during all soil-disturbing
18 activities?

19 MR. RINGER: No, not on site.

20 MS. REYNOLDS: So who would be
21 responsible for detecting contamination in the
22 first instance during construction?

23 MR. RINGER: The people who are doing
24 the construction.

25 MS. REYNOLDS: Condition waste-4 also

1 requires the applicant to contact certain
2 agencies, quote, "If, in the opinion of the
3 environmental professional, significant
4 remediation may be required."

5 This condition gives the applicants
6 environmental professional discretion to determine
7 whether significant remediation is needed,
8 correct?

9 MR. RINGER: If it may be required, not
10 if it's needed.

11 MS. REYNOLDS: Could you explain --

12 PRESIDING MEMBER MOORE: Wait, I'm
13 sorry, Mr. Ringer, I miss the distinction of that.
14 Would you answer that question again? I've been
15 playing that sentence back in my mind.

16 Let's try again. Counsel, you ask your
17 question again and let's see if we --

18 MS. REYNOLDS: Okay. Do you want me to
19 quote the relevant portion of the condition again?

20 PRESIDING MEMBER MOORE: Go ahead, just
21 so we get a complete question on the record.

22 MS. REYNOLDS: Okay, the condition
23 states, if, in the opinion of the environmental
24 professional, significant remediation may be
25 required, and it continues. Does this condition

1 give the applicants environmental professionals
2 discretion to determine whether significant
3 remediation is needed?

4 MR. RINGER: No. If the environmental
5 professional thinks that there may be some
6 remediation that's required, the reason he has to
7 contact the various agencies are to seek their
8 determination on whether something actually is
9 required.

10 The environmental professional is not
11 going to make a determination of whether something
12 actually is needed, but if they come into contact
13 with contamination that's, for instance, more than
14 de minimis contamination, then in the opinion of
15 the environmental professional, that's what he's
16 there for, is to make those determinations.

17 MS. REYNOLDS: But he does not need to
18 contact the agencies listed in waste-4, does he,
19 if, in his opinion, significant remediation may
20 not be required?

21 MR. RINGER: Correct. If they just find
22 small amounts of contamination and he determines
23 that it's a very localized, for instance if in an
24 area there's a very localized staining of the soil
25 that's obviously petroleum hydrocarbons or

1 something, and it's a cubic foot or a cubic yard,
2 he's not going -- the chances are that he's not
3 going to contact the agencies.

4 MS. REYNOLDS: So it's his decision?

5 MR. RINGER: Correct.

6 MS. REYNOLDS: If contamination is found
7 during project construction the proposed
8 conditions do not give the CEC any authority to do
9 anything about it, correct?

10 MR. RINGER: As far as the waste
11 conditions go, I'm not familiar with the worker
12 safety, but as far as the waste conditions go, if
13 they make a report -- if the environmental
14 professional files any reports, we get a copy of
15 that and we look that over.

16 And then we also can have oversight as
17 to whether or not we think that perhaps they
18 should have contacted any other agencies.

19 MS. REYNOLDS: Can you tell me where
20 that's stated in the conditions or verification?

21 MR. RINGER: Verification, waste-4, the
22 project owner shall notify the CPM in writing
23 within five days of any reports filed by the
24 environmental professional. And indicate if any
25 substantive issues have been raised.

1 MS. REYNOLDS: Does that verification
2 give the CPM any oversight authority or any avenue
3 for involvement in these issues?

4 MR. RINGER: Well, that's why we have
5 this verification in there is that if we get a
6 report, so we can look at it, we certainly can
7 raise questions as to whether we feel that the
8 appropriate agencies either need to or should have
9 been contacted.

10 MS. REYNOLDS: Is that something -- I
11 don't see that in the verification. Is that
12 something you're implying into the verification?

13 MR. RINGER: I guess you can say it's
14 implied. That's one reason that we get submittals
15 and look them over.

16 MS. REYNOLDS: Approximately one-half of
17 the water supply line would be placed underground,
18 correct?

19 MR. RINGER: I believe that's correct.
20 I believe that's correct.

21 MS. REYNOLDS: I have no further
22 questions.

23 PRESIDING MEMBER MOORE: All right, on
24 recross? I'm sorry, redirect.

25 MS. WILLIS: Just one question.

1 REDIRECT EXAMINATION

2 BY MS. WILLIS:

3 Q Mr. Ringer, do you routinely review all
4 the submittals that are required under this
5 condition in other projects?

6 A Yes, for every project, for every waste
7 condition I review all the submittals. And then I
8 pass on my recommendations to the compliance
9 project manager.

10 If that were to include any further
11 action necessary on the part of the project owner,
12 then that would be taken.

13 MS. WILLIS: That's all I have, thank
14 you.

15 HEARING OFFICER WILLIAMS: Anything
16 further?

17 MS. REYNOLDS: Yeah, I have one follow
18 up.

19 RECROSS-EXAMINATION

20 BY MS. REYNOLDS:

21 Q Mr. Ringer, is this standard CEC
22 practice, or is there anything written that says
23 the CPM has authority to, once he's reviewed this
24 report, recommend or require changes to it?

25 MS. WILLIS: Actually, I object on the

1 grounds that he is not the compliance manager on
2 this project. To the extent that he knows that
3 answer, but he isn't the compliance manager.

4 MS. REYNOLDS: Well, I think he just
5 testified as what normally happens, so --

6 MS. WILLIS: As part of -- as the waste
7 management staff person. You just asked what the
8 compliance manager would do.

9 MS. REYNOLDS: Okay, Mr. Ringer, under
10 the proposed conditions of certification, does the
11 condition or the verification expressly give the
12 CPM or any one at the CEC any oversight authority
13 or any other type of authority?

14 MR. RINGER: It's not expressly stated;
15 however, we routinely review all the documents
16 that we received, and with the guidance -- if I
17 had any questions at all I'd contact the agencies,
18 myself, and see if there's any question.

19 MS. REYNOLDS: No further questions.

20 PRESIDING MEMBER MOORE: Okay.

21 Applicant? None.

22 All right, rather than just start CURE's
23 testimony, I have to make a conference call at
24 11:00, so we'll call time out until 11:15. And
25 I'll be back downstairs.

1 (A recess ensued.)

2 HEARING OFFICER WILLIAMS: Okay, we're
3 going to go on the record. And I would note that
4 all parties who were present before the recess are
5 again present.

6 I would also note that I had a
7 discussion with the parties, and that we've agreed
8 that transcripts -- excuse me, briefs on all the
9 topics that we've covered so far will be due ten
10 days from the date that I receive the transcript
11 of today's hearing.

12 And I will email the parties of that
13 date. If the day happens to fall on the weekend,
14 then the ten days will carry over to the first --
15 or holiday, for that matter -- the briefs will
16 carry over to the first business day following the
17 weekend or holiday. Okay?

18 Okay, with that, unless Commissioner
19 Moore has something, we're ready to proceed with
20 CURE and its presentation.
21 Whereupon,

22 J. PHYLLIS FOX
23 was recalled as a witness herein, and, having been
24 previously duly sworn, was examined and testified
25 further as follows:

1 DIRECT EXAMINATION

2 BY MS. REYNOLDS:

3 Q Dr. Fox, you have before you a document
4 entitled, testimony of J. Phyllis Fox, Ph.D., on
5 behalf of the California Unions for Reliable
6 Energy on waste management and worker safety
7 impacts of the Elk Hills Power Project, dated
8 January 12, 2000.

9 A I do.

10 Q Was this testimony prepared by you or
11 under your direction?

12 A It was.

13 Q Is this testimony true and correct to
14 the best of your knowledge?

15 A It is.

16 Q Do you have any changes to your
17 testimony?

18 A Yes, I do, on the last page, and I
19 believe you prepared an errata. On the last page,
20 page 14, the first bulleted item, everything from
21 in the last line of that bulleted item, the
22 phrase, "and within the three-quarter mile oil
23 development area" should be struck.

24 MS. REYNOLDS: I believe we have
25 identified that as exhibit 21-I.

1 HEARING OFFICER WILLIAMS: I, I believe.

2 Yes, it has been admitted.

3 BY MS. REYNOLDS:

4 Q Can you briefly state your
5 qualifications with respect to hazardous waste
6 contamination and related worker exposure issues?

7 A Surely. I have worked on a large number
8 of contaminated sites in California over the past
9 20 years, including several oil field properties.

10 Q Can you summarize your testimony for the
11 Committee?

12 A Yes. In my opinion it's likely that
13 contamination will be encountered during the
14 construction of this project. And I think both
15 the applicant's written testimony, the AFC, and
16 the FSA all acknowledge that possibility. It's
17 one of the points that I think all of the parties
18 agree on.

19 Some of the reasons that I am concerned
20 about the discovery of contamination during
21 construction is first the cultural resources
22 survey that was done on site noticed in two
23 separate areas an odor of petroleum hydrocarbons
24 on the site during their survey.

25 Second, there are portions of the site

1 that are covered with grass and vegetation. And
2 in a grassy area, in the course of a phase one,
3 you cannot observe contamination, even if it's
4 present.

5 And then finally, based on a photograph
6 in the AFC of the site, you can clearly see that
7 there are pipelines that go beneath the surface.
8 And it is pretty common knowledge that pipelines
9 leak. And in the course of a phase one you could
10 not visually observe any subsurface leakage from
11 those pipelines.

12 I believe that summarizes the reasons
13 that I believe there's likely to be contamination.

14 Since we all agree that contamination is
15 likely to be discovered, or it could potentially
16 be discovered during the construction of the site,
17 I think the question before the Commission is what
18 to do about it. And I'd like to direct the
19 remainder of my remarks to what to do about it,
20 basically.

21 And, in my opinion, three things need to
22 happen. First, since it's obvious that there are
23 subsurface facilities at this site, based on the
24 photograph in the AFC, which by the way is figure
25 3.3-1, I think a geophysical survey should be done

1 to identify the locations of any subsurface
2 structures. Because they could pose a real safety
3 hazard to construction workers if you accidentally
4 run into them.

5 Second, I feel in the case of the
6 project site, itself, that some characterization
7 work should be done prior to construction. I
8 would never recommend that every square inch of
9 soil be remediated, as suggested by the applicant
10 in their testimony. I don't believe I ever made
11 any remarks like that in any of these hearings.

12 However, I do feel that some --

13 MS. LUCKHARDT: I would object to
14 mischaracterization of our testimony.

15 HEARING OFFICER WILLIAMS: Okay, you'll
16 have an opportunity to clear it up on cross-
17 examination.

18 DR. FOX: I do feel that some
19 characterization work is warranted here for a
20 number of reasons.

21 First, in my testimony last week I
22 showed a figure that, from the AFC again, that
23 located wells on the boundary of at least three
24 sides of this facility. And wells typically have
25 associated with them subsurface pipelines and

1 sumps of various types that contain drilling muds
2 and produced water and other materials. They are
3 literally on the boundary of this facility.

4 And then with respect to the linears,
5 the phase one did not address the linears at all.
6 And based on the applicant's estimates of
7 disturbed area, 110 acres would be disturbed in
8 toto, of which 15 of those are at the plant site.

9 The remaining areas that would be
10 disturbed for the gas line, the water line and the
11 transmission line have not received any
12 investigation that I am aware of that's in the
13 record. There hasn't been a phase one done on
14 those linear disturbed corridors. Or, as far as I
15 know, any sampling, either.

16 Now, both the applicant and staff have
17 proposed conditions of certification to deal with
18 undiscovered contamination during the construction
19 process, itself. And I would like next to turn to
20 those proposed conditions and critique them. And
21 then after I critique them I would like to make
22 some recommendations about what I think needs to
23 be in the proposed conditions of certification.

24 First, I would like to go to the waste
25 management section of the FSA which Mr. Ringer

1 sponsored. To page 85, waste-4.

2 And in this condition Mr. Ringer
3 proposes that if contamination be identified, an
4 environmental professional would be called in to
5 make observations and recommendations as to the
6 disposition of the contamination.

7 I have a number of problems with that.
8 First, in contaminated properties or potentially
9 contaminated properties, the environmental
10 professional is normally on site, rather than at
11 an off-site location where they have to be called
12 in.

13 Mr. Ringer suggested, based on an
14 exhibit to my testimony, that in the case of the
15 Sacramento Federal Courthouse, that that was not
16 the case. However, I am the author of that
17 oversight plan that was developed by the City of
18 Sacramento, and I was there. And he simply
19 misinterpreted what was written.

20 The environmental professional at that
21 site was on site throughout construction. And the
22 sentence that he read, if you looked at other
23 portions of it, you would discover that the
24 environmental professional was there. And all
25 that was being called for in that particular

1 location that he quoted, was for the construction
2 manager to find the guy on the site and bring him
3 over and point out the contamination.

4 The environmental professional was
5 continuously present during construction of the
6 federal courthouse in Sacramento.

7 The second problem I have with waste-4
8 is it doesn't require any monitoring. Normally
9 when construction takes place in a contaminated or
10 potentially contaminated area the environmental
11 professional will use handheld instruments to make
12 real time instantaneous measurements during the
13 construction process.

14 Most typically you will find an FID, a
15 flame ionization detector or a PID, a photo
16 ionization detector, and in many cases both used.
17 In addition to an FID or a PID, which measure
18 volatile organic compounds, it is also typical to
19 use a handheld device for making measurements of
20 dust. And the most commonly used method in my
21 experience is a miniram, like a DR2000 for
22 example, which uses a light scattering technique
23 to measure dust concentrations.

24 Dust concentrations are important
25 because you can have elevated concentrations of

1 metals associated with the dust. And you can also
2 have elevated concentrations of semi-volatile
3 organic compounds, like PAHs and PCBs associated
4 with them. And you want to watch the dust levels
5 to make sure that they are not elevated.

6 It is also fairly typical for the
7 environmental professional to be empowered with
8 the ability to collect soil samples and send them
9 off for testing. And that is also not required by
10 waste-4.

11 A third problem I have with waste-4 is
12 it does not specifically require that construction
13 be stopped in the event that contamination is
14 identified. And I think that is a fairly
15 important item to include in a certification
16 condition.

17 If you identify undiscovered
18 contamination and you continue working in it and
19 don't rope off the area and stop construction in
20 that particular area, you could have adverse
21 exposures before anyone has an opportunity to
22 figure out what it was.

23 A fourth problem I have with waste-4 is
24 it requires no training of the workers. And many
25 of the projects that I've worked on where there is

1 known contamination at a site, the workers,
2 themselves, particularly the excavation workers,
3 will be HAZWOPER trained. And here there's no
4 requirement for any HAZWOPER training of the
5 workers who will be working in what I think all
6 parties acknowledge as being a potentially
7 contaminated area.

8 And then fifth, waste-4 does not specify
9 any reporting protocols, if you will, for the
10 environmental professional. A construction
11 manager's main goal is to make sure that the
12 project is completed on time and within budget.
13 And his top priority is not going to be worrying
14 about contaminated soil.

15 I've worked on many sites where there is
16 substantial friction between the construction
17 manager and the health and safety professional at
18 the site. And it's quite important that the
19 environmental professional not report through the
20 construction manager. There has to be a separate
21 line of reporting.

22 Those are my comments on staff's waste-
23 4. I'd next like to talk about a similar
24 condition which is contained in the testimony of
25 Gary Cronk. Gary Cronk's waste management

1 testimony in attachment A on page 4, there is a
2 section 6, mitigation measures.

3 And the first of those is a measure
4 that's similar to staff's waste-4, but in my
5 opinion, it's much closer to the mark. It's a
6 good start.

7 It first requires excavation contractors
8 hired to perform demolition of equipment and
9 initial grading of the plant site will be OSHA
10 trained in hazardous waste operations. That's a
11 good first step.

12 The problem I have with that is it's not
13 specific as to the type of training that would be
14 required. And I fear that the term OSHA-trained
15 may not include HAZWOPER training based on some of
16 the testimony I heard this morning. I would
17 recommend that the excavation workers receive 40-
18 hour HAZWOPER training.

19 The applicant's proposed mitigation
20 measure goes on to say a qualified geologist will
21 oversee field operations and perform field
22 screening and analytical laboratory testing of
23 soils disturbed during excavation and grading.
24 This is very good.

25 The applicant here is proposing that the

1 environmental professional be on site; that the
2 environmental professional be a qualified
3 geologist; that the environmental professional
4 oversee field operations; and that they perform
5 field screening and analytical laboratory testing
6 in soils. These are all very good recommendations
7 and I support them.

8 However, with respect to field screening
9 the applicant hasn't been specific as to what type
10 of field screening would be done. And I would
11 like to recommend that that phrase be expanded to
12 identify what type of field screening would be
13 done. And I would recommend PID/FID and a method
14 to monitor dust continuously like a miniram.

15 They also recommend analytical
16 laboratory testing of soils. Again, I support
17 that, but again it's too general as it's stated.
18 There should be additional language added here
19 that would specify how many samples would be
20 collected; like one sample every 1000 cubic yards,
21 or every 5000 cubic yards.

22 There should also be a specification of
23 what would be measured. And I would recommend
24 that at a minimum metals should be measured
25 because you can't smell them and you can't see

1 them. And I would also recommend that semi-
2 volatile organic compounds be measured. Those are
3 things like PAHs and PCBs.

4 They go on to say if contaminated soils
5 are discovered which exceed cleanup levels
6 established by the regional board and the county
7 health department, the impacted soils will be
8 excavated and transported off site to a permitted
9 soil treatment facility.

10 Again, I support that. But, again it's
11 not general enough. With respect to the cleanup
12 levels I would like to see cleanup levels
13 specified in advance. It's my understanding that
14 DTSC is currently in the process of developing
15 cleanup standards for the Elk Hills oil field.

16 They have draft recommendations at this
17 point, and they are very close to publishing their
18 finals. And I recommend, based on a review by the
19 parties to make sure that we're all in agreement
20 with them, and assuming that they're reasonable,
21 that those DTSC proposed cleanup standards
22 specifically for this oil field, specifically for
23 industrial use, be adopted for use in this case.

24 And then finally, another component that
25 is missing from the applicant's recommended

1 mitigation here is any trigger levels that would
2 trigger action in the event that anything was
3 detected with the field screening instruments, the
4 PID, the FID or the miniram.

5 And I think those trigger levels need to
6 be specified in a certification condition so we
7 know what we're dealing with.

8 BY MS. REYNOLDS:

9 Q Dr. Fox, you stated that with regard to
10 this proposed mitigation that it should identify
11 which materials will be tested for. What
12 detection limits would you recommend?

13 A The detection limits should be beneath
14 the levels of concerns, and the levels of concern
15 have not been determined yet, but I would
16 recommend that the cleanup levels, when they are
17 proposed by DTSC, would be a reasonable starting
18 point.

19 Q Dr. Fox, in your opinion does the phase
20 one environmental site assessment that the
21 applicant had prepared for the project identify
22 and assess all potential hazardous materials that
23 may be encountered during construction?

24 A No. It does not. First it was
25 restricted to the 15-acre plant site and didn't

1 address the linears at all. Second, it only
2 addressed things that you could visually see. And
3 as I stated previously there's a potential for
4 subsurface structures here.

5 And there's also the potential for
6 things that you couldn't see because of vegetation
7 on the site. And there's also a lot of
8 contaminants that might be there that you cannot
9 see or smell.

10 Q Dr. Fox, you addressed, or you discussed
11 your feelings with regard to staff's proposed
12 condition waste-4. Do you have any comments about
13 safety-1?

14 A Safety-1 is the worker safety proposed
15 certification condition that deals with the
16 construction health and safety plan, which
17 includes a couple of pieces like the IPP.

18 I support that with one exception. I
19 believe that it should be explicitly stated in
20 that condition that it apply to contaminated
21 materials.

22 Q Would you clarify that, what applied to
23 the contaminant materials?

24 A That the various subplans under the
25 construction health and safety plan explicitly

1 address contaminated materials. They're not
2 normally considered in that kind of a plan. And,
3 although the applicant in the AFC does note that,
4 and has stated that they will be considered,
5 there's no guarantees. There's nothing in the
6 certification conditions that specifically require
7 that.

8 Q Would you characterize the project site
9 as a typical construction site?

10 A No, I would not.

11 Q Would you explain why?

12 A Well, it's in the middle of an intensely
13 developed oil field where, you know, activities
14 occurred over nearly a century, during much of
15 which waste handling practices were not exemplary.

16 Q Do you have any response to the
17 applicant's or staff's critique of your testimony?

18 A I do. With some patience I will go
19 through point-by-point and rebut the comments that
20 you heard earlier. And I'll probably do it in no
21 particular order.

22 I believe staff testified that all 65 of
23 the chromium contaminated sites that I identified
24 and located on a map attached to my testimony had
25 been remediated, implying that there was no

1 concern.

2 It is my understanding, based on
3 discussions with DTSC, that many of those closed
4 and remediated sites were done historically to
5 different standards than are in place today --

6 MS. WILLIS: Excuse me, I'm going to
7 object. We don't have that information in front
8 of us. Do you have a record of that conversation?
9 Or is that something that's before us?

10 MS. REYNOLDS: I believe that's
11 appropriate in response to your witness' testimony
12 about DTSC, their reaction, the letter that you
13 provided.

14 MS. WILLIS: But we actually had a
15 letter. She's talking about a conversation.

16 MS. REYNOLDS: I think she's capable of
17 testifying to her knowledge based on whatever
18 sources she's contacted.

19 HEARING OFFICER WILLIAMS: One second.

20 (Pause.)

21 HEARING OFFICER WILLIAMS: We're going
22 to sustain the objection. It's hearsay, counsel.

23 DR. FOX: In my opinion many of those
24 remediates sites were remediated historically and
25 they were not remediated to today's standards.

1 And were they re-evaluated, given today's
2 standards, in many cases additional remediation
3 would be required.

4 You heard testimony to the effect that
5 chromium 6 is reduced to chromium 3 in the
6 environment and that chromium 3 is a less
7 hazardous form. It is true that some chromium 6
8 does go to chromium 3, and that chromium 3 is a
9 less hazardous form.

10 However, the reactions are reversible.
11 And it's also true in many cases, and in many of
12 the cases that I have worked on, that the opposite
13 happens. And that chromium 3 actually goes to
14 chromium 6.

15 And, additionally, the materials that
16 were being cited, which are attachments to my
17 exhibit, make it clear that the conversion of
18 chromium 6 to chromium 3 occurs in the drilling
19 muds, themselves, rather than in the compounds
20 that are used in the drilling muds.

21 Historically, the way chromium 6
22 compounds were added is a bag of the chromate
23 compounds was sitting next to the well, and you
24 would add chromium into the drilling mud as you
25 needed it. And it was common for spills from the

1 bags to occur. And it was also common for the
2 bags, themselves, to end up being buried and left
3 on site.

4 That chromium, the chromium from the
5 additive that was used does not necessarily
6 convert to chromium 3.

7 You also heard testimony to the effect
8 that chromium 6 could be easily detected because
9 it's very soluble and when it dries out it leaves
10 a yellow powder on the surface is what I believe I
11 heard.

12 Well, that happens only after it rains.
13 When it rains and the soil dries out, it can form
14 a yellow powder on the surface. However, it goes
15 away pretty quickly, and it doesn't stay there.
16 You know, the wind blows it away basically.

17 So you would only be able to see that
18 sort of thing immediately after rain. As you
19 know, it doesn't rain very much in Kern County,
20 and a lot of this construction would take place in
21 the summer.

22 Second, if the spill happened to occur
23 in an area where there's vegetation growing, or
24 has subsequently been vegetated, you wouldn't be
25 able to see any yellow chromium powder on the

1 surface.

2 There was a suggestion that arsenic and
3 chromium would always be associated with crude oil
4 which you can see, or with drilling muds that are
5 clay particles which you could also identify by
6 differences in texture. That's not true.

7 There are lots of uses of both chromium
8 and arsenic in the oil field which would result in
9 their being present in forms other than associated
10 with oil, or other than associated with drilling
11 muds.

12 I just gave you an example of hexavalent
13 chromium 6 which was basically scooped out of a
14 bag that was located at the well site, itself.
15 Lots of problems with spillage. That wouldn't be
16 associated with drilling muds; it wouldn't be
17 associated with oil.

18 Ditto on arsenic. Arsenic compounds
19 were used as anticorrosion agents in oil drilling
20 historically. And the arsenic was introduced into
21 the well and then upon production the arsenic-
22 containing fluids were pumped out and put into a
23 sump. There were lots of problems with sumps
24 overflowing and also with sumps being present in
25 contaminants at the bottom.

1 There was some discussion of the fact
2 that the primary exposure route for construction
3 workers is inhalation. That is simply not true.
4 The main exposure route for construction workers
5 is inadvertent ingestion of soils and dermal
6 exposure due to a caking of soil on the skin. And
7 I know that from my experience.

8 In the case of the Sacramento Southern
9 Pacific Railyard sites where I worked for nearly a
10 decade, the City of Sacramento was very concerned
11 about the exposure of construction workers during
12 construction.

13 And as part of that project we actually
14 went to active construction sites in the
15 Sacramento area, and also in other places, and
16 observed the exposures that construction workers
17 received.

18 And construction workers, in fact, get a
19 lot of soil on exposed skin, and they also
20 inadvertently ingest soil. It is standard
21 practice by the Department of Toxic Substances
22 Control to require construction worker scenarios
23 and risk assessments performed for contaminated
24 sites and DTSC commonly requires that all three
25 exposure routes be included: inhalation, dermal

1 and ingestion.

2 And based on the health risk assessments
3 that I have personally done on construction
4 workers, usually the largest fraction of the risk
5 comes not from inhalation but from dermal or
6 ingestion. And that's just the way it is.

7 If you had a potent inhalation toxicant
8 it could swing the other way, but most of the
9 contaminants that you would expect to find in an
10 oil field would primarily act through ingestion or
11 dermal absorption.

12 Which leads me to one of my favorite
13 topics, the PELs, or the permissible exposure
14 levels --

15 PRESIDING MEMBER MOORE: Before you go
16 there, Dr. Fox, let me just ask you a question
17 about something you were just saying about the
18 hexachromate 6, which you assumed, or which you
19 stated was used out of bags and things where there
20 was a well.

21 Just for my own recollection, I've been
22 going back over the record, there is no well on
23 this site, is there?

24 DR. FOX: There's no well within the
25 boundaries of the site that I am aware of.

1 However, there are four wells sitting right
2 outside of the boundary.

3 PRESIDING MEMBER MOORE: And those sites
4 typically would have had this type of material
5 used when they were done?

6 DR. FOX: They could have. I did not do
7 any research to determine that those wells were
8 drilled.

9 PRESIDING MEMBER MOORE: Okay. Thank
10 you.

11 HEARING OFFICER WILLIAMS: Please
12 proceed.

13 DR. FOX: You know, and you can't
14 eliminate the possibility that there was a well on
15 the site historically, for which there are no
16 records. Because this oil field has been in
17 existence and actively produced for nearly a
18 century.

19 BY MS. REYNOLDS:

20 Q Dr. Fox, did you say you can or cannot?

21 A You cannot eliminated the possibility
22 that a well, at some point, over the history of
23 the Elk Hills oil field may have been present on
24 the site.

25 HEARING OFFICER WILLIAMS: Yes, I

1 believe you were moving into PELs, Dr. Fox, just
2 to --

3 BY MS. REYNOLDS:

4 Q PEL.

5 A Oh, PEL, right PEL. Permissible
6 exposure limit. We heard testimony that the
7 CalOSHA PEL's protect workers at contaminated
8 sites and should be used for evaluating worker
9 exposure at contaminated sites.

10 I have a couple of points I would make
11 about that. First, the PELs were developed for
12 use in a controlled workplace environment, not for
13 construction workers digging in contaminated
14 soils.

15 The PELs should not be used in
16 isolation. They come -- if you go back and look
17 at the origin of the PEL, you will find that they
18 assume an aggressive industrial hygiene program
19 that has a number of parts. Typically includes
20 medical monitoring. It typically specifies
21 different protective equipment that should be
22 nearby or used. Like in the case of arsenic hoods
23 are supposed to be used.

24 It assumes that monitoring takes place.
25 It assumes that medical supervision is available.

1 These PELs are not designed to protect even 100
2 percent of the workers. And if you go back and
3 look at the OSHA documents that develop them,
4 they're quite explicit about that.

5 That's why there's five or six other
6 pieces that go along with them, like protective
7 hoods and medical surveillance.

8 Furthermore, they assume exposure
9 through inhalation only. When there is a risk of
10 say a skin carcinogen, NIOSH documentation will
11 typically require that gloves be used and that no
12 skin be exposed, which of course you can't usually
13 reasonably do at a construction site.

14 And as I just explained, inhalation is
15 not the main exposure route for a construction
16 worker. It's dermal and inadvertent ingestion.
17 The PELs are aimed primarily at inhalation
18 exposures.

19 Furthermore, there have been a lot of
20 studies that have been published in the refereed
21 literature which have demonstrated that the PELs,
22 if you go back and you look at the studies that
23 the PELs were based on, you will find in many
24 cases that the levels at which the PELs were set
25 are actually levels in which there were adverse

1 health impacts in the studies that were used.

2 And then finally the basis for the PELs
3 is inconsistent. And in many cases what you find
4 is they were set at the lowest level that was
5 measured at the time.

6 And I believe there is an exhibit in my
7 public health testimony written by Dr. Melanie
8 Marty, who's the Chief of the Air Toxics Branch at
9 the Office of Environmental Health Hazards
10 Assessment, or OEHHA, --

11 MS. LUCKHARDT: I'd have to object to
12 this, this hasn't been filed in the worker safety
13 area. I realize that this is a document she may
14 have used in public health, but it isn't something
15 that has been filed and referred to in worker
16 safety.

17 MS. REYNOLDS: Well, I believe that
18 staff -- you know, there's some amount of cross-
19 over here. Staff referred to public health issues
20 in their testimony.

21 MS. LUCKHARDT: I believe that was
22 simply to clarify --

23 MS. WILLIS: Actually we were --

24 HEARING OFFICER WILLIAMS: We'll allow
25 it, we'll allow it, it's in the record.

1 DR. FOX: Anyway, if you look at her
2 email, which is an attachment to my public health
3 testimony, she makes many of the same remarks I'm
4 making here about the PELs. And believes that
5 they are inappropriate for assessing health
6 impacts to workers at contaminated sites.

7 HEARING OFFICER WILLIAMS: Where did you
8 indicate that that was, in your public health? Is
9 it in --

10 DR. FOX: It's one of the exhibits to my
11 public health testimony.

12 I think you heard a lot of testimony
13 about the fact that you can smell or see any of
14 the contamination that you're likely to identify
15 or run into on this site. And specifically there
16 was a mention that if natural gasoline were
17 encountered, which was one of the materials that
18 was handled at this site, that you could readily
19 detect it by odor because it has a characteristic
20 odor of gasoline.

21 I'm not sure if that's true. I don't
22 know how many of you have been at a construction
23 site in an oil field, but the oil field has a very
24 high background odor of petroleum hydrocarbons
25 that permeates the air on almost a continuous

1 basis.

2 And at a construction site where you've
3 got a lot of diesel equipment, there is
4 additionally the smell of diesel in the air. And
5 also at a construction site you usually have a
6 fuel tank, so there's the smell of hydrocarbons
7 from refueling of vehicles, as well.

8 In fact, at a construction site in an
9 oil field one would expect to find a fairly high
10 background level of hydrocarbon odor. So I think
11 that it is unlikely that you could specifically
12 identify contaminated soil based on hydrocarbon
13 odors in this kind of environment.

14 There was a DTSC letter that was just
15 introduced into the record by Mr. Ringer, and I
16 would like to talk a bit about that.

17 HEARING OFFICER WILLIAMS: Dr. Fox, it's
18 been marked as exhibit 33. It is exhibit 33.

19 DR. FOX: I believe that this letter
20 describes an evaluation that DTSC did of the
21 project site only, and not of the linears. And it
22 also does not imply that DTSC is not concerned
23 about the impact of potential contamination at
24 this site on construction workers.

25 DTSC simply look at the project site to

1 determine whether or not any of the --

2 MS. WILLIS: I'm going --

3 DR. FOX: -- solid waste management --

4 MS. WILLIS: -- to object. Do you work
5 for DTSC? I'm not sure that she's qualified to
6 testify to what DTSC looked at, based upon this
7 letter, other than what it says.

8 PRESIDING MEMBER MOORE: Yeah, let's
9 just take what's in the letter at face value.
10 Let's not take it any farther than that. Your
11 comments on the components of the letter are
12 welcome.

13 HEARING OFFICER WILLIAMS: So the
14 objection is sustained as to speculation basically
15 on your part. Commissioner Moore would like you
16 to contain your remarks to basically what's stated
17 in the letter.

18 DR. FOX: Okay. The purpose of this
19 letter was to point out that the project site is
20 not located within any of the solid waste
21 management units that were identified in the June
22 30, 1998 letter.

23 It does not address other issues. And,
24 as you know, there is a memorandum of
25 understanding between DTSC and the Energy

1 Commission to deal with site contamination issues
2 vis-a-vis worker impacts. And this individual who
3 signed this letter, Wade Cornwell, who is the
4 chief of the land disposal branch, is not involved
5 in that --

6 MS. LUCKHARDT: Wait, we've gone beyond,
7 once again. I believe here she is testifying as
8 to the involvement of this specific person in
9 DTSC. We have his name and his title contained
10 within the letter, but we have nothing further.

11 MS. REYNOLDS: We would be happy to have
12 Mr. Cornwell come in here and testify. CURE has
13 no means of compelling Mr. Cornwell to testify
14 about this letter about --

15 MS. LUCKHARDT: If CURE was interested
16 she could have requested that the Committee
17 subpoena Mr. Cornwell to appear.

18 MS. WILLIS: I'm going to second that
19 objection. We can't speculate what Mr. Cornwell's
20 involvement in this was.

21 PRESIDING MEMBER MOORE: We're going to
22 sustain the objections and ask Dr. Fox, in this
23 case, to state her objection to the conclusion if
24 that's really where she's going, as succinctly as
25 she can.

1 I think we're going to have to stay away
2 from characterizations about the people who wrote
3 it. I don't have that in front of me, and so it's
4 simply not possible to focus on it.

5 So, if you have a disagreement with the
6 conclusion I think you should say that, and then
7 let's go to the next question.

8 MS. REYNOLDS: We would also -- I mean
9 this letter was not attached to staff's testimony
10 or referred to it in, I don't believe.

11 MS. WILLIS: The letter was docketed on
12 April 12, 1999, so CURE did have access to this
13 letter and probably received a copy of it.

14 MS. REYNOLDS: Was this letter contained
15 in --

16 HEARING OFFICER WILLIAMS: Counsel, I
17 don't think we need to discuss it. I mean I gave
18 you an opportunity to object to the letter coming
19 in as evidence.

20 MS. REYNOLDS: Okay, I would then ask
21 the Committee to hold the record open and subpoena
22 Mr. Cornwell.

23 PRESIDING MEMBER MOORE: For what
24 purpose? I mean, let me just, unless I'm missing
25 something, he has one sentence here, and I'll re-

1 read it, at the risk of being totally redundant:
2 Based on a review we have determined that the
3 proposed project is not within the areas of
4 concern identified by DTSC report titled "Naval
5 Petroleum Reserve No. 1, Elk Hills, California,
6 Resource Conservation and Recovery Facility Act,
7 dated June 30, 1998. Therefore, DTSC has no
8 comments on the proposed project."

9 Where's the mystery? No comment. In
10 their opinion it doesn't lie in the project
11 boundary. Where's the controversy?

12 MS. REYNOLDS: I think the statement
13 that you just read states, and I think this is a
14 reasonable -- I don't even think this is an
15 interpretation -- that it's not within areas that
16 they have already identified as contaminated and
17 in need of further assessment or remediation.

18 It doesn't say anything about the
19 possibility of finding further contamination
20 during construction.

21 MS. LUCKHARDT: I believe counsel is
22 testifying, and I also believe the letter states
23 what it states. We can all read it.

24 PRESIDING MEMBER MOORE: Well, I think
25 actually -- we can all read it. I just read it.

1 And it does state what it states. So if there's a
2 disagreement with that, then that's a point that
3 Dr. Fox can say, I disagree with this because A, B
4 and C.

5 But after that, we're going to have to
6 confine it to that. If you've got other
7 questions, counsel.

8 DR. FOX: I disagree with this. The
9 exhibit to my testimony shows that the project
10 linears indeed fall within some of the areas of
11 concern.

12 Furthermore, I'd like to point out that
13 there's an alternate process that the Energy
14 Commission is supposed to go through to evaluate
15 potential contamination at sites such as this.
16 There's a memorandum of understanding and a
17 requirement for staff coordination with DTSC on
18 these sorts of issues.

19 The person responsible for that happens
20 to reside in statewide compliance --

21 MS. LUCKHARDT: I think we are moving
22 beyond the ability of this witness to say what the
23 Energy Commission should be doing in relation to
24 the MOU.

25 PRESIDING MEMBER MOORE: Well, no,

1 that's not right. You think there's something
2 within the Energy Commission, there's a process
3 within the Energy Commission that runs parallel to
4 this or supplements this. What do you think that
5 process is?

6 DR. FOX: Right, there's a --

7 PRESIDING MEMBER MOORE: Name the
8 process.

9 DR. FOX: The memorandum of
10 understanding between DTSC and the Energy
11 Commission.

12 PRESIDING MEMBER MOORE: Okay, thank
13 you. And we'll take that and let's stop.

14 Counsel.

15 MS. REYNOLDS: Okay.

16 BY MS. REYNOLDS:

17 Q Dr. Fox, do you have any other items to
18 rebut?

19 A Yes, I do. There was a suggestion that
20 because the linears follow existing corridors that
21 one should not be concerned about them.

22 I would point out several things about
23 that. First, we don't know when those existing
24 corridors were installed; if they were 50 years
25 ago, nobody may have worried about contamination

1 along them.

2 Further, we don't know whether anybody
3 bothered to look when the existing corridors were
4 installed. So, just because the pipelines and
5 linears of this project follow existing corridors
6 does not mean that there is no concern about
7 potential contamination within those corridors.

8 There were remarks about the fact that
9 public exposure standards should not be used for
10 oil field workers because members of the public
11 include many sensitive individuals and public
12 exposure standards are designed to protect all
13 individuals. And furthermore, that workers
14 receive shorter exposures.

15 Those types of issues are easily dealt
16 with in health risk assessments by using a shorter
17 exposure duration time, and by using cancer
18 potency factors and other values that are not tied
19 into the sensitivity of the exposed parties.

20 Routinely done, it's very common for
21 this kind of site to do a risk assessment. And
22 develop cleanup standards to insure the protection
23 (sic) workers are protected.

24 Q Dr. Fox, does that mean you believe a
25 health risk assessment should be prepared for this

1 project?

2 A I do, but unfortunately there's no data
3 to prepare one with because the applicant has not
4 done any characterization at the site.

5 Let me quickly look through my notes and
6 see if I have anything else.

7 (Pause.)

8 DR. FOX: As to the claim that the
9 health and safety plans couldn't be prepared now
10 because you don't have a detailed construction
11 plan, I don't agree with that.

12 I've worked on many projects where the
13 health and safety plan was prepared in advance of
14 having the detailed information that the applicant
15 claims you need.

16 Anyone that has prepared any number of
17 these things knows that 99 percent of them are
18 boilerplate. And anyone that has prepared any
19 number of these things is intimately familiar with
20 construction projects and what the dangers are of
21 construction projects.

22 All of the equipment that would be used
23 on this site has already been identified in the
24 AFC. I could prepare a health and safety plan
25 which had most of the details that would be of

1 concern for this proceeding in 20 to 40 hours
2 without knowing any more than I know now.

3 There was a suggestion that there were
4 no buried pipelines on site. I believe staff
5 claimed that the phase one states that there are
6 no buried pipelines on site in an attempt to rebut
7 my written testimony.

8 First, I'd like to point out that Mr.
9 Tau, in his testimony last week, stated that there
10 were buried pipelines on the site. And second,
11 I'd like to point you to figure 3.3-1 from the
12 AFC. I have a copy here if you'd like to look at
13 it.

14 PRESIDING MEMBER MOORE: That's okay, we
15 have it.

16 DR. FOX: But if you look at that figure
17 carefully you will see in a number of places that
18 there are areas where pipelines simply go
19 underground. Underground pipelines are buried
20 pipelines in my view.

21 There were the usual remarks about the
22 fact that workers outside of the boundary of the
23 power plant should be treated as workers and the
24 only exposure standards are OSHA exposure
25 standards.

1 I believe that dialogue more
2 appropriately belongs in the public health
3 section. I'd just like to remind you that I
4 disagree with it. That even though this is
5 private property, the standard procedure for
6 evaluating off-site health impacts throughout
7 California by every regulatory agency I've ever
8 worked for is to evaluate the workers within the
9 boundaries of a facility that one is evaluating,
10 such as a power plant, as on-site workers. And
11 apply OSHA exposure standards.

12 When you're evaluating off-site impacts
13 due to the on-site activities like the ammonia
14 storage tank or handling of contaminated soil
15 during remediation or construction, the
16 appropriate standards to use for those off-site
17 workers are different. You never apply OSHA
18 exposure standards for exposure of parties off of
19 the site where the activity occurs.

20 And there are many attachments to my
21 public health testimony that very clearly make
22 that point.

23 That's all I have.

24 MS. REYNOLDS: That will be all.

25 HEARING OFFICER WILLIAMS: Thank you.

1 PRESIDING MEMBER MOORE: Thank you.

2 Staff. Or, I'm sorry, I'll go to the applicant.

3 CROSS-EXAMINATION

4 BY MS. LUCKHARDT:

5 Q Dr. Fox, you've referred to preparing a
6 health and safety plan, and you have referenced
7 the one for the railroad site. Can you describe
8 briefly or name the other ones that you've
9 prepared?

10 A Sure. Health and safety plans for Avila
11 Beach.

12 Q Did you personally prepare the health
13 and safety plan for Avila Beach?

14 A I didn't prepare the entire plan. I was
15 Unocal's reviewer for the plan.

16 Q Okay, so you reviewed the plan at Avila
17 Beach?

18 A I reviewed the plans.

19 Q Thanks. Any others?

20 A Yes, I prepared a number of health and
21 safety plans for remediation projects in Colorado.

22 Q And what type of remediation projects
23 were they?

24 A A variety of projects, most of them
25 involved ponds, abandoned waste ponds.

1 Q So actual waste material, not like a
2 pond that animals would be living in? A waste
3 pond?

4 A A waste pond, that's right. I was also
5 involved in the health and safety planning for the
6 Guadalupe Oil Field.

7 Q And did you prepare that plan, or review
8 that plan?

9 A No, I did not prepare that plan, but I
10 was involved in the review of it.

11 Q And do you have HAZWOPER training?

12 A No, I don't.

13 Q And in reviewing your rÇsumÇ I didn't
14 see you mention membership in things like American
15 Industrial Hygiene Association, or American
16 Academy of Industrial Hygiene, or Academy of
17 Certified Hazardous Materials Managers.

18 Are you a part of any of those groups?

19 A No, I'm not.

20 Q And in referring to your specific
21 testimony you used various words that I'm hoping
22 you might help me understand a little better.

23 Actually before that, have you ever been
24 on the Elk Hills site?

25 A No, I haven't.

1 Q You refer to, on page 1 of your
2 testimony, it's the third paragraph, first line,
3 you say, contaminated. Can you define what you
4 describe as contaminated, or when you determine
5 that something's contaminated?

6 A Page 1, third paragraph --

7 Q Third paragraph, first line.

8 A Contaminated would mean presence of
9 chemicals above natural background.

10 Q Okay, so contaminated to you is
11 everything above background, is that correct?

12 A Yes.

13 Q And then on page 2 of your testimony
14 there is a reference in the third paragraph to
15 toxic substances. What do you define as toxic?

16 A They are chemicals that are known to
17 have adverse health impacts.

18 Q At what level?

19 A Depends on the chemical.

20 Q And where would you be determining what
21 the level would be per chemical?

22 A It would depend on who was being exposed
23 and how long they were being exposed, and what the
24 agency was that had oversight.

25 Q Okay. In this, so then it would vary?

1 A Yes, it could vary.

2 Q I guess I'm a little confused about your
3 testimony as to whether your concern is for site
4 clean up or worker exposure. Maybe you could help
5 me out with that.

6 A My concern is with worker exposure to
7 contamination on the site.

8 Q Okay, so your concern is the impact to
9 workers from any potential site contamination?

10 A Right.

11 Q In your discussion regarding PELs, are
12 you suggesting that the Commission should develop
13 new standards?

14 A No, I'm not.

15 Q Then I guess I'm confused, because it's
16 my understanding that PELs apply to worker safety,
17 and you just had a large discussion where you went
18 through the fact that you didn't like the way PELs
19 were determined?

20 A PELs are generally, as I stated, not
21 applicable to construction workers working in
22 contaminated sites for a couple of reasons.

23 First, the PEL is based on inhalation
24 exposures exclusively. That's how they were
25 developed. They were developed from inhalation

1 exposures. And at a contaminated site
2 construction workers can have other exposure
3 routes, like inadvertent ingestion of contaminated
4 soil and dermal exposure.

5 Q Okay, but I guess it's my understanding
6 that OSHA requires, and OSHA has set these PEL
7 levels for worker exposure, is that correct?

8 A Yes, they have set them for worker
9 exposure, but they were not set specifically for
10 workers working in contaminated sites.

11 Q Then what were they set for?

12 A They were set primarily for classical
13 workplace environments like factories, for
14 example.

15 Q Isn't that an indoor exposure?

16 A Yes, it is.

17 Q Wouldn't an indoor exposure be greater
18 than an outdoor exposure?

19 A No, because in an indoor exposure you
20 have ventilation systems.

21 Q So you mean to tell me that in an indoor
22 exposure with ventilation you have better air
23 circulation than in an outdoor construction
24 environment?

25 A You can have better circulation. You

1 also have a controlled workplace.

2 Q So you're telling me a construction site
3 is not a controlled workplace?

4 A It's not a controlled workplace in the
5 same sense that a worker working with hazardous
6 materials in an indoor environment is. In an
7 indoor environment you can have hoods, you can
8 have different protective clothing that the worker
9 would use that would really get in the way of a
10 construction worker.

11 For example, in the case of arsenic, the
12 NIOSH adopting document was seven different items,
13 in addition to the exposure level that has to be
14 in place, like typically you'd use a hood, you
15 know. You wouldn't expect to see a construction
16 worker with a hood over their head.

17 Q So, are you saying that personal
18 protective equipment A level that could not be
19 used on a construction site?

20 A They could be, but we don't have any
21 certification conditions that require them.

22 Q You mean to tell me that if we violated
23 the PEL levels we would not need to put
24 construction workers in greater levels of personal
25 protective equipment?

1 A I assume you would, but there's no
2 conditions here that require that you do anything
3 to determine whether or not you would even violate
4 those kinds of limits.

5 Q Have you not reviewed the outlines of
6 the IIPPs contained in the AFC?

7 A Yes, I have reviewed that.

8 Q I'm sorry, I'm going to have to get to
9 that section.

10 Okay, if you look at 514-2 at the
11 bottom, it's table 514-1, the very final entry is
12 working with hazardous materials and hazardous
13 waste.

14 A Yes.

15 Q Does that not identify procedures for
16 dealing with hazardous wastes and hazardous
17 materials?

18 A It does, and I support that and applaud
19 you for having it in there. And I believe earlier
20 I testified that safety-1 should be expanded to
21 specifically include this. There's nothing in
22 safety-1 the way it's now written that would
23 require this.

24 Q It's my understanding of the way the
25 Commission -- going back to our earlier

1 discussion, then it is your testimony that
2 personal protective equipment for construction
3 workers would not be required by the PELs?

4 A If you're asking me if personal
5 protective equipment would not be required by the
6 PEL, if you're monitoring for all the constituents
7 of concern, and you have an aggressive health and
8 safety plan in place, if you exceeded the PEL you
9 could trigger it.

10 The question is what kind of monitoring
11 are you going to do? And are you going to look
12 for all the right things?

13 You don't have any characterization data
14 on this site at all. I mean you could have
15 something out there that you don't expect. And
16 you wouldn't know if somebody was going to be
17 exposed to it or not.

18 That's the problem. You don't have any
19 information here. I mean I haven't heard anybody
20 advocating doing monitoring for arsenic in ambient
21 air so you could determine whether or not the
22 workers were exposed.

23 If there were explicit requirements for
24 monitoring for arsenic, for hexavalent chromium
25 and for other materials, --

1 Q What level of concentration of arsenic
2 would be required to be in the ambient air to
3 exceed a PEL level?

4 A I don't have those in front of me right
5 now. I don't recall. I think it's something like
6 1 mcg/cubic meter. It is low, but I don't recall
7 as I sit here.

8 Q And what percentage of the soil would
9 have to be arsenic to get 1 mcg/cubic meter in the
10 air?

11 A I would have to make a calculation to
12 answer that. I can't answer that as I sit here.

13 Q Would it be a relatively great
14 percentage?

15 A It wouldn't have to be if you had a hot
16 spot with relatively high arsenic concentration
17 and you were digging in it, it wouldn't have to be
18 very much soil.

19 Q I guess I'm confused because if it's in
20 the soil in a small area how could you, on an open
21 air construction site, wouldn't the dust be so
22 thick that you couldn't see if you got 1 mcg/cubic
23 meter of arsenic in the air?

24 A No.

25 Q And this is based on what?

1 A My experience.

2 Q Your experience on which site?

3 A My experience working on the Southern
4 Pacific Railyard site; my experience working --

5 Q And --

6 A -- on the Avila Beach site.

7 Q And the contamination at Avila Beach, I
8 believe, I'm not as familiar with it as you are,
9 was quite extensive, it's my recollection?

10 A Pardon?

11 Q The contamination at Avila was quite
12 extensive?

13 A The contamination at Avila was primarily
14 petroleum -- it was petroleum hydrocarbons. I
15 wouldn't characterize it as extensive, but it was
16 petroleum hydrocarbons.

17 Q Okay. You wouldn't characterize the
18 Avila Beach contamination as extensive, then how
19 can you possibly characterize this site as having
20 any extensive type of contamination?

21 A I don't believe I used the word
22 extensive in any of my testimony. My problem with
23 this site is that nothing is known about the
24 contamination at it because no characterization
25 work has been done.

1 Q And looking at the Southern Pacific
2 site, can you please describe the types of
3 contamination that were contained in the Southern
4 Pacific site?

5 A The Southern Pacific site, I think it's
6 a 265-acre site, and most of the site is not
7 relevant to this case, because there are
8 contaminants other than petroleum hydrocarbon.

9 The reason that I picked the federal
10 courthouse material, which I attached to my worker
11 safety testimony, is because that was primarily a
12 petroleum hydrocarbon contaminated site.

13 Q And in your work at Avila Beach what was
14 the arsenic contamination levels?

15 A Arsenic was not an issue there.

16 Q Okay. And what about the railroad yard?

17 A Arsenic was not an issue there, either.

18 Q Okay. I guess I'm confused because I
19 thought earlier that you stated that those were
20 the two sites where you had experience with
21 arsenic?

22 A I said those were the sites where I had
23 experience with health and safety plans, but I
24 didn't say with respect to arsenic. I have worked
25 on arsenic contaminated sites, but those are not

1 they.

2 Q And so which sites have you worked on
3 that had arsenic contamination?

4 A They're all in Colorado, and they're all
5 associated with various aspects of oil shale
6 production. There are high levels of arsenic in
7 oil shale and in the waste from oil shale.

8 Q Okay. You testified earlier that you
9 could prepare a health and safety plan on this
10 facility at this time. And I guess I'm confused
11 again, because that it seems to me in some
12 instances you're asking for additional information
13 on the site, and yet on the other hand you're
14 saying you could prepare the plan at this point in
15 time.

16 Is it your recommendation that we use a
17 boilerplate health and safety plan at this site?

18 A That's what is usually done. No. It's
19 not my recommendation that you use a boilerplate
20 one. I would prefer to see some actual
21 characterization work done so you can tailor it to
22 this particular site.

23 But in the absence of that, you can make
24 some assumptions about what's there and set very
25 low limits to make sure you've covered all your

1 bases.

2 Q So then you agree it would be better to
3 do a site-specific health and safety plan?

4 A Yeah, it would be better.

5 Q You stated at one point in your
6 testimony that in an oil field the background
7 odors permeate the air, I believe, was that
8 correct?

9 A That's correct.

10 Q From the oil field. And in your
11 testimony you refer to the cultural resources
12 expert referring to smells of oil, I believe, or
13 hydrocarbons, is that correct?

14 A That's correct.

15 Q I guess I'm having trouble understanding
16 the difference, or if an oil field emits odors
17 which permeate the air, wouldn't that -- couldn't
18 that have been what the cultural resources expert
19 was noting?

20 A A couple comments there. I think my
21 testimony about the background odor was in
22 conjunction with an active construction site, and
23 the point I was making was that at an active
24 construction site you've got a lot of diesel
25 equipment with the smell of diesel exhaust. You

1 also have fuel tanks that they use to fuel the
2 vehicles.

3 In the case of the cultural resources
4 study they only identify hydrocarbon odors in two
5 locations, and not everywhere. So from that I
6 would conclude that there wasn't a high level of
7 petroleum hydrocarbon odors at the time they did
8 the survey.

9 Q Would you consider a cultural resource
10 expert an expert in contamination?

11 A I think that most people that have
12 automobiles and live in 20th century America can
13 identify petroleum hydrocarbon odors.

14 Q I was simply asking if you considered a
15 cultural resource expert an expert in
16 contamination.

17 A No, they're not experts in
18 contamination, but I certainly would expect them
19 to be able to identify a petroleum hydrocarbon
20 odor.

21 Q Do you have experience with underground
22 storage tank cleanup?

23 A Yes.

24 Q And can you identify which sites?

25 A Sure. At the South Hampton site in

1 Benecia there were a number of underground storage
2 tanks that I dealt with there.

3 I have also worked on a number of
4 leaking underground storage tanks at gasoline
5 stations. One of them very recently in West
6 Oakland.

7 MS. LUCKHARDT: I'm sorry, I've been
8 handed so many notes over the last half hour I'm
9 having trouble getting them all organized.

10 HEARING OFFICER WILLIAMS: Would you
11 like a few minutes?

12 MS. LUCKHARDT: I would love a few
13 minutes.

14 HEARING OFFICER WILLIAMS: Let's take
15 five minutes.

16 (A brief recess ensued.)

17 HEARING OFFICER WILLIAMS: I would state
18 that all parties who were present at the recess
19 are again present.

20 Counsel, you may continue with your
21 cross-examination.

22 MS. LUCKHARDT: I just have a few more
23 questions.

24 BY MS. LUCKHARDT:

25 Q Dr. Fox, in your testimony you refer to

1 figure 3.3-1 out of the AFC.

2 A Correct.

3 Q And if you refer to that figure isn't it
4 true that the pipes proceed through the berm area,
5 and are then above ground?

6 A Are you referring to the top or the
7 bottom figure?

8 Q I am referring to the bottom figure.

9 A Okay, in the bottom figure, right-hand
10 side, middle, there are a series of pipes, it's
11 like in a pipe corridor --

12 Q Correct.

13 A -- that does proceed underground through
14 the berm. I would also, though, point you to --
15 those pipes make a 45-degree angle with another
16 pipe which dives right underground.

17 Q Okay, I'm not seeing where that is.
18 Maybe you can help me --

19 A Can I come over there?

20 Q -- find that.

21 MS. REYNOLDS: Make sure it's clear for
22 the record.

23 (Pause.)

24 PRESIDING MEMBER MOORE: All right,
25 we're all looking at the same picture then, and

1 there's an above-ground pipe proceeding from the
2 right-hand side of the photograph at a 45-degree
3 angle. It goes up about 4 cm and then dives
4 underground.

5 So we're all seeing the same thing.

6 MS. LUCKHARDT: Okay. I'm going to move
7 off of that because I don't know, myself, exactly
8 whether that pipe ends right there or it goes into
9 the ground. And it could be seen as going into
10 the ground. So I can't dispute that.

11 BY MS. LUCKHARDT:

12 Q You refer to the use of a miniram in
13 your testimony, is that correct?

14 A Yes.

15 Q Now, a miniram is used to determine the
16 amount of dust, is that correct?

17 A Correct.

18 Q Does it detect metals?

19 A No, it does not.

20 Q Or PAHs?

21 A No, it does not.

22 Q Okay. And you stated in your testimony
23 when we were talking about the cultural resources
24 expert that any person could -- any person who has
25 operated a motor vehicle could detect the presence

1 of hydrocarbons, is that correct?

2 A That's correct.

3 Q So then wouldn't that include a
4 construction worker?

5 A Certainly.

6 MS. LUCKHARDT: I have nothing further.

7 HEARING OFFICER WILLIAMS: Staff.

8 MS. WILLIS: Just a few questions.

9 CROSS-EXAMINATION

10 BY MS. WILLIS:

11 Q Dr. Fox, you testified in regards to the
12 cultural resource person ID-ing the petroleum
13 hydrocarbons by odor, could they also identify the
14 source and location?

15 A Not in the materials that I have seen.

16 Q Also, you talked extensively about --
17 you talked about the phase one study. Does the
18 phase one site assessment procedure rely only on
19 visual survey?

20 A No, it relies on records review, aerial
21 photographs, and usually a site reconnaissance
22 that relies on visual observation.

23 MS. WILLIS: That's all I have, thank
24 you.

25 PRESIDING MEMBER MOORE: Thank you,

1 counsel. Redirect?

2 REDIRECT EXAMINATION

3 BY MS. REYNOLDS:

4 Q Dr. Fox, you were asked to define
5 contaminated as used in your testimony. And you
6 said that that would be chemicals above background
7 concentrations.

8 Are these chemicals that could adverse
9 impact human health?

10 A They could. You'd have to know what the
11 concentration was and do an evaluation.

12 Q Dr. Fox, are you familiar with the
13 HAZWOPER training programs and what is covered in
14 those programs?

15 A Yes.

16 Q During your cross you referred to the
17 AFC page 5.14-2, the last entry. Does this entry
18 identify who, which employees would be HAZWOPER
19 trained?

20 A No, it does not.

21 Q Does it identify whether the training
22 would be the 40-hour training or the eight-hour
23 training?

24 A No, it does not.

25 Q Would you like to see more detail?

1 A I would love to see more detail.

2 Q Dr. Fox, under stable wind conditions
3 would contaminants in the soil that were released
4 to the air during construction activities disperse
5 quickly in the atmosphere?

6 A No. Under stable wind conditions it
7 would primarily be volatile organic compounds and
8 they would not disperse quickly.

9 Q In your opinion should there be site
10 characterization of contamination before the
11 worker health and safety plans are prepared?

12 A Yes.

13 Q If this characterization is not done
14 before the plans are prepared, what --

15 MS. LUCKHARDT: I believe this is beyond
16 the scope of my --

17 PRESIDING MEMBER MOORE: I think that's
18 right.

19 MS. LUCKHARDT: Yes.

20 PRESIDING MEMBER MOORE: Counsel, you're
21 going to have to contain yourself to what was
22 testified in direct.

23 MS. REYNOLDS: Yeah, that's what I'm --
24 I wrote these specifically in response to your
25 questions about could you prepare site plans

1 without characterization work. And you asked
2 questions about these issues.

3 MS. LUCKHARDT: I'm sorry, could you
4 repeat your question so that I can --

5 MS. REYNOLDS: Yes.

6 BY MS. REYNOLDS:

7 Q If further site characterization was not
8 done what approach should be taken in preparing
9 the worker safety and health plans?

10 MS. LUCKHARDT: Okay, that's fine.

11 DR. FOX: Well, if no site
12 characterization work is done then that means you
13 know nothing about the potential contamination at
14 the site, which means that you would have to be
15 very conservative in your approach. It would
16 basically require monitoring of everything one
17 could reasonably expect to find and set reasonably
18 low trigger levels.

19 BY MS. REYNOLDS:

20 Q Dr. Fox, how would metals and PAHs be
21 detected during construction activity, or how
22 could they be detected?

23 A Two ways. The applicant, Mr. Cronk's
24 testimony, appendix A, the first mitigation
25 measure that I talked about in my direct,

1 recommended that the geologist who would be the
2 environmental professional would collect samples
3 and send them off-site for analysis. Those
4 samples could be analyzed for PAHs and metals.

5 Another way you could do it is in the
6 case of PAHs, there is a portable instrument known
7 as the PAS-2000, which is capable of detecting
8 PAHs at concentrations as low as 1 ppb in ambient
9 air. I have actually used that at some sites.

10 I am not aware of any method for doing
11 real-time metal measurements with handheld
12 instruments, so that would almost require that
13 samples be collected in some other way and shipped
14 off to a laboratory for analysis.

15 Q Dr. Fox, staff asked you a question on
16 cross about the phase one and what standards are
17 normally followed for phase ones. Can you render
18 an opinion about the phase one that was prepared
19 in this case?

20 A In my opinion the phase one that was
21 prepared in this case was one of the poorer phase
22 ones that I have looked at.

23 Q Can you explain why?

24 A Well, for one thing, it's not specific
25 as to what files were reviewed. There is an

1 extensive storehouse of information on the Elk
2 Hills oil field that was collected by Bechtel.
3 There's a room full of investigative reports.

4 And it is not clear to me from reviewing
5 the report whether all of this material was
6 reviewed or not.

7 It's normal to do a pretty aggressive
8 aerial photo review, and to list every aerial
9 photo that one looks at. This phase one, I
10 believe, only shows one or two very poor copies of
11 aerial photos which are basically illegible.

12 I believe we filed a data request
13 complaining about it, and got no response. I
14 could not tell from the aerial photos that are in
15 the phase one anything about the site, because the
16 reproductive quality is so poor.

17 I'm used to seeing a list of all the
18 aerial photos that are consulted and a discussion
19 of each feature that one identifies on the aerial
20 photo. There's no such discussion and no such
21 list in this document.

22 Another thing I'm used to seeing in a
23 phase one in an area with a long history of
24 intense industrial activity like the Elk Hills oil
25 field, is interviews with people that have

1 firsthand knowledge of waste disposal practices on
2 the site. I didn't see any mention of interviews
3 in this document.

4 For the record, figure 6, which is
5 apparently an aerial photo, which I'll hold up for
6 you, is essentially illegible. And we tried to
7 get a clean copy and were not provided one.

8 HEARING OFFICER WILLIAMS: Let the
9 record reflect that Dr. Fox is holding up the
10 phase one?

11 DR. FOX: Figure 6 out of the phase one.

12 HEARING OFFICER WILLIAMS: Thank you.

13 DR. FOX: There's another similar
14 photograph in appendix A. It's called 1983 aerial
15 photo of the site, which I'm holding up. And,
16 again, this is illegible. It's basically black.

17 So there's no way for an independent
18 party such as CURE to make any evaluation as to
19 potential disturbances of this site based on
20 aerial photography without going out and
21 collecting them ourselves, because the photographs
22 are so poor.

23 PRESIDING MEMBER MOORE: Other questions
24 on redirect?

25 MS. REYNOLDS: No.

1 PRESIDING MEMBER MOORE: Thank you.

2 Recross? Applicant?

3 MS. LUCKHARDT: I have nothing further.

4 MS. WILLIS: Nothing further.

5 PRESIDING MEMBER MOORE: All right.

6 MS. REYNOLDS: At this time I would like
7 to move for entry into the record Dr. Fox's
8 testimony on waste management and worker safety
9 impacts, and her errata. I believe the errata has
10 already been marked.

11 HEARING OFFICER WILLIAMS: The errata is
12 in. Is there any objection to the testimony?

13 MS. LUCKHARDT: No.

14 MS. WILLIS: None.

15 MS. LUCKHARDT: Nor to the errata.

16 HEARING OFFICER WILLIAMS: Admitted.

17 MS. REYNOLDS: I don't believe we gave
18 an exhibit number to the testimony yet, is that
19 correct, or --

20 HEARING OFFICER WILLIAMS: It will be,
21 the testimony will be the next in order, which, I
22 believe, is 34.

23 MS. REYNOLDS: Okay.

24 PRESIDING MEMBER MOORE: Okay, well,
25 then we're back up to the other things to move

1 into the record. Staff? Applicant?

2 MS. LUCKHARDT: No. I have at least one
3 short question on redirect. I don't know if you
4 want to do that at this time, or --

5 PRESIDING MEMBER MOORE: Let's do it.

6 MS. WILLIS: Excuse me, we also have a
7 couple rebuttal questions, as well.

8 MS. LUCKHARDT: I'm sorry, it is
9 rebuttal. Staff is correct on that.

10 Could I just take a few minutes to get
11 that organized?

12 PRESIDING MEMBER MOORE: All right.

13 We'll go off the record for five minutes.

14 (A brief recess ensued.)

15 HEARING OFFICER WILLIAMS: And let me
16 state that all parties who were present before the
17 recess are again present in the hearing room.

18 MS. LUCKHARDT: I only have one question
19 in rebuttal and that is to Mr. Rowley.

20 DIRECT EXAMINATION

21 BY MS. LUCKHARDT:

22 Q Referring to the figure 3.3-1 that we
23 had been referring to earlier, I believe there is
24 a pipe which Dr. Fox pointed out in our earlier
25 discussions. I'm going to ask Mr. Rowley if he

1 can identify what is transported in that pipe.

2 A That pipe is a fire water pipe. And if
3 you look closely at the photo you can see the
4 monitor or water cannon attached directly to the
5 pipe.

6 MS. LUCKHARDT: I have nothing further.

7 PRESIDING MEMBER MOORE: Yes, staff, you
8 indicated you have --

9 MS. WILLIS: Actually -- I'm sorry --

10 PRESIDING MEMBER MOORE: -- I'm sorry,
11 you have a question on --

12 MS. REYNOLDS: I just wanted to ask --
13 well, can I cross on that question?

14 PRESIDING MEMBER MOORE: Sure.

15 MS. REYNOLDS: Okay.

16 CROSS-EXAMINATION

17 BY MS. REYNOLDS:

18 Q I was wondering if Mr. Rowley could
19 identify for us the other pipeline right next to
20 that?

21 A The other pipes that are running cross-
22 ways to that pipe?

23 Q There are two -- it seems to be --

24 A There's a shadow of a --

25 PRESIDING MEMBER MOORE: There's a pipe

1 and a shadow.

2 MR. ROWLEY: There's a pipe and a shadow
3 of the pipe.

4 BY MS. REYNOLDS:

5 Q There's one that goes, I guess if we
6 assume that north is the top of the page, there's
7 one pipe that goes northwest and then there's one
8 pipe that runs east-west, or a set of pipes that
9 runs east-west.

10 A Right. The set of pipes that run east-
11 west are those that penetrate the berm. They run
12 above-grade, penetrate the berm, and then reappear
13 above-grade.

14 Q Okay.

15 MS. REYNOLDS: Thank you.

16 PRESIDING MEMBER MOORE: Thank you.

17 Does staff have --

18 MS. WILLIS: Yes, thank you.

19 DIRECT EXAMINATION

20 BY MS. WILLIS:

21 Q Mr. Ringer, the letter from Department
22 of Toxic Substances Control already marked exhibit
23 33, the first sentence states: The Department of
24 Toxic Substances Control, DTSC, has reviewed the
25 application for certification..." and then it goes

1 on.

2 To your knowledge does the application
3 for certification include linears?

4 A Yes, it does.

5 Q Dr. Fox discussed your statements
6 regarding the chrome 6, chrome 3. Would you care
7 to clarify your statements?

8 A Yes. I was referring to the sections of
9 the environmental impact statement which was
10 included in her appendix as appendix A, where it
11 talks about the more hazardous form of chromium
12 being chrome 6.

13 Because of the native conditions of the
14 soils, actually the types of soils, it's basically
15 reduced to the less hazardous type of chrome,
16 chrome 3.

17 There has been chromium compounds used
18 in the drilling of oil wells in that field since
19 1954. And this environmental impact statement
20 quotes tests that were done showing virtually no
21 hexavalent chromium remaining as of 1991.

22 So, it does not mention anything about
23 reconversion back to chrome 6, and it's the native
24 conditions of the soils down there that cause
25 that.

1 I would also like to say that as far as
2 remediation of the different sites and the
3 different standards, page 3.2-8 refers to the
4 remediation and a cleanup level of 1 ppm was
5 negotiated with the Department of Toxic Substances
6 Control for all 65 sites. And that's the level
7 that they were remediated to.

8 Q Did Dr. Fox accurately characterize your
9 testimony regarding the reporting requirements for
10 contaminated soil at the courthouse EIR -- in the
11 courthouse EIR?

12 A The courthouse EIR, which was appendix
13 after her testimony, I quoted one part of that
14 which requires the constructor to notify the
15 environmental person upon suspected discovery of
16 apparent contamination. It wasn't my intent to
17 say whether or not the environmental oversight
18 official was on site or not on site. My point is
19 that the people doing the construction are the
20 ones to notify the environmental official upon
21 suspected discovery of contamination. And that's
22 exactly the way condition waste-4 reads.

23 Q Thank you.

24 //

25 //

1 DIRECT EXAMINATION

2 BY MS. WILLIS:

3 Q Mr. Tyler, Dr. Fox cites the SP and
4 courthouse sites quite a bit through her
5 testimony. Is there an important distinction
6 between those two sites and this particular site
7 at Elk Hills?

8 A Yes. The sites that she's talking about
9 in those two studies are designated sites.
10 They're required to be cleaned up.

11 In requiring that they be cleaned up we
12 have to look, we have to do a risk assessment to
13 determine whether the cleanup is adequate for the
14 end use of the property.

15 There's been assessments. They've been
16 determined to be contaminated to a level that DTSC
17 is involved in cleaning them up, and that's the
18 major distinction here.

19 The phase one study has already
20 indicated that this site is not a designated
21 contaminated site. So we wouldn't go into the
22 risk assessment aspects that we did in the nature
23 of these.

24 Q Mr. Tyler, could you please address PELs
25 and their application?

1 A Yes. I understand that Dr. Fox may have
2 some concern with regard to differences between
3 exposure levels that are applicable to the
4 workplace and those that are applicable to the
5 public.

6 But it's critically important that we
7 make that distinction. As I've stated earlier,
8 the standards of protection are extremely
9 different between the workplace exposure and
10 public exposure.

11 In the public exposure criteria we have
12 to protect all segments of the population with an
13 adequate margin of safety. For workers we simply
14 have to, insofar as practical, insure that they
15 won't suffer diminished health or functional, or
16 life expectancy.

17 So there's a big difference between the
18 way we treat workers and the public. And, in
19 fact, I'll give you a real clear example that
20 relates directly to what we're talking about.

21 The exposure standard, the REL that
22 we've been talking about for arsenic, for the
23 public, for a cleanup site, for a risk assessment
24 is three orders of magnitude lower than the
25 concentration that's permitted for the workplace.

1 Those are huge distinctions. We need to
2 keep in mind whether we're dealing with workers,
3 or whether we're dealing with the public and end
4 use of the property. And that's not being done
5 adequately in this discussion.

6 MS. WILLIS: That's all we had.

7 HEARING OFFICER WILLIAMS: Thank you.
8 Anything further, counsel?

9 MS. REYNOLDS: A couple cross.

10 CROSS-EXAMINATION

11 BY MS. REYNOLDS:

12 Q Mr. Ringer, you had read earlier from
13 Dr. Fox's exhibit A, page 3.2-7. Do you have
14 that?

15 MR. RINGER: Yes.

16 MS. REYNOLDS: On the last paragraph on
17 page 3.2-7 can you read the first two sentences of
18 that paragraph, starting with, hexavalent
19 chromium?

20 MR. RINGER: Hexavalent chromium
21 compounds were typically stored in bags at the
22 well pads and were added to the drilling fluid
23 when needed. Occasionally the contents of these
24 bags were spilled, and these spills and/or the
25 bags, themselves, become inadvertently buried.

1 MS. REYNOLDS: Okay. I have no further
2 questions.

3 PRESIDING MEMBER MOORE: All right.
4 Opportunity for rebut, CURE does, because we've
5 offered it to everyone else.

6 MS. REYNOLDS: Can we have a moment?

7 DR. FOX: I never turn down an
8 opportunity to rebut anything.

9 DIRECT EXAMINATION

10 BY MS. REYNOLDS:

11 Q Dr. Fox, do you have any rebuttal
12 testimony?

13 A Give me a minute to think.

14 (Pause.)

15 DR. FOX: Mr. Tyler made the remark that
16 normally it's only appropriate to do a risk
17 assessment when you're dealing with a contaminated
18 site that's undergoing cleanup, and that that
19 would not be appropriate here.

20 I actually agree with that. The problem
21 here is that we don't know if we have a
22 contaminated site or not because the work has not
23 been done to make that determination.

24 So you can't categorically say that it
25 would be inappropriate to do a risk assessment

1 because we simply don't know enough.

2 With respect to Mr. Ringer's remarks
3 about the section that he read out of exhibit F to
4 my worker safety testimony dealing with the
5 Southern Pacific environmental oversight plan, the
6 point that Mr. Ringer states that he was trying to
7 make was that it is the constructor who notifies
8 the environmental professional when there's a
9 contamination problem.

10 Actually, at that site, if you read all
11 the documents in attachment F, what you will find
12 is it was the responsibility of the environmental
13 professional to find and identify contamination.
14 And then notify the constructor so that the
15 project could be shut down.

16 If, however, it was the constructor who
17 identified the contamination, rather than the
18 environmental professional, then the constructor
19 would notify the environmental professional. And
20 I know that, because I was involved in both
21 drafting the plan and oversight of it.

22 The remarks that Mr. Ringer made about
23 the conversion of hexavalent chromium to trivalent
24 chromium I believe came out of a paragraph dealing
25 with drilling muds. And what DTSC has found with

1 respect to drilling muds is that in the particular
2 environment present in drilling muds, that most of
3 the hexavalent chromium does convert over to
4 trivalent chromium.

5 The remarks that I was making had to do
6 with the bags of chromium compounds that were
7 stored adjacent to the wells, and I don't believe
8 that there's been any determination that that
9 hexavalent chromium is all converted over to
10 trivalent chromium. And, in fact, that's why
11 there were 65-odd sites that were contaminated
12 with hexavalent chromium in the oil field. The
13 spillage of those bags of chemicals were actually
14 quite a common phenomenon.

15 And that conversion does not necessarily
16 take place. And as I stated, it can sometimes go
17 the other way.

18 I believe that's all I have.

19 PRESIDING MEMBER MOORE: Thank you.

20 Questions from staff? No. Applicant?

21 MS. LUCKHARDT: No questions.

22 PRESIDING MEMBER MOORE: No. All right,
23 ladies and gentlemen, that brings us to the
24 conclusion of our evidentiary hearings.

25 I'll turn to Major and ask if he has

1 cleanup items to announce. And then I'll make
2 some final remarks.

3 HEARING OFFICER WILLIAMS: I would
4 request that the parties, in their briefs, if you
5 do have changes in the conditions or whatever that
6 you would recommend to employ, I think we talked
7 about it already, red-lining and cross-outs, so it
8 will be readily apparent what you are
9 recommending.

10 We've noticed the hearing on March 7th
11 for 10:00. And --

12 PRESIDING MEMBER MOORE: Let's change it
13 to 9:00 in the morning. We'll meet at 9:00 unless
14 that conflicts, makes everybody's schedule crazy.
15 Do you want to leave it at 10:00 if you're coming
16 back.

17 MS. LUCKHARDT: Then I would request, if
18 we are going to start at 10:00, that all
19 participants be available to work into the
20 evening, if necessary.

21 PRESIDING MEMBER MOORE: Horrible thing
22 to ask, but it's probably practicable.

23 MS. REYNOLDS: Well, how? I mean we're
24 talking about an hour here, does that mean from
25 5:00 to 6:00, or are we talking 5:00 to midnight?

1 Moving it from end of day 5:00 to midnight. I
2 don't understand.

3 PRESIDING MEMBER MOORE: Well, I doubt
4 that we're going to stay till midnight, counsel,
5 but we've gone until 9:00 or 9:30 on some of the
6 other hearings, and I think that that could
7 happen. I don't intend for that to happen, let me
8 just say that at the outset. So we'll start at
9 10:00.

10 Ten days after the receipt of today's
11 proceedings briefs are due.

12 HEARING OFFICER WILLIAMS: As we've
13 discussed, ten days after my receipt of the
14 transcript of this proceeding I will notify the
15 parties. And if the ten days falls on a weekend
16 or holiday it will be moved until the following
17 business day.

18 MS. REYNOLDS: Can I ask a point of
19 clarification. Is the day that you receive the
20 transcripts the same day that they'll be made
21 available to the parties? I don't know how long
22 it takes to get them on the website.

23 HEARING OFFICER WILLIAMS: I believe so,
24 I believe they put them on the website the very
25 same day.

1 If any party has any problem with
2 respect to either receipt of the transcripts or
3 the briefs, just let me know and we'll try to deal
4 with --

5 PRESIDING MEMBER MOORE: Right. The
6 intention here is not to penalize anyone. The
7 intention is to just expedite the process as
8 rapidly as we can.

9 So, I mean neither one of us have any
10 advantage in penalizing for, you know, they didn't
11 get them on X day. We just want to keep this
12 moving as rapidly as we can.

13 Yes, ma'am.

14 MS. LUCKHARDT: I would ask that we
15 close the record on waste management and worker
16 safety.

17 PRESIDING MEMBER MOORE: We will close
18 it.

19 All right, with that let me say that I
20 will be going over my notes with Major and we will
21 be seeing you again on March 7th.

22 HEARING OFFICER WILLIAMS: Thank you.

23 PRESIDING MEMBER MOORE: We're
24 adjourned.

25 (Whereupon, at 1:25 p.m., the hearing
 was adjourned.)

CERTIFICATE OF REPORTER

I, DEBI BAKER, an Electronic Reporter,
do hereby certify that I am a disinterested person
herein; that I recorded the foregoing California
Energy Commission Hearing; that it was thereafter
transcribed into typewriting.

I further certify that I am not of
counsel or attorney for any of the parties to said
hearing, nor in any way interested in the outcome
of said hearing.

IN WITNESS WHEREOF, I have hereunto set
my hand this 11th day of February, 2000.

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